

CAI
IB 46
-15 B 30

Canadian Topographical
[Bulletin, no. 30]

Government
Publications

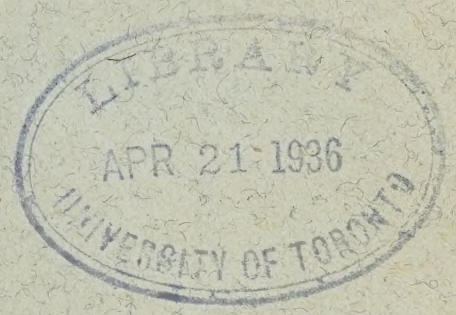
EXTRACTS

FROM

REPORTS ON TOWNSHIPS 17 TO 32, WEST OF
THE PRINCIPAL MERIDIAN

RECEIVED FROM SURVEYORS

TO JULY 1, 1914.



COMPILED IN THE OFFICE OF THE SURVEYOR GENERAL

Published by authority of the HONOURABLE W. J. ROCHE,
Minister of the Interior



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NOTICE.


The descriptions of townships and township outlines contained in this pamphlet have been taken from surveyors' reports on file in this office. All reports received to July 1, 1914, are included.

The townships are placed in ranges, the number of the range being at the top of the page and the number of the township in heavy figures on the left side.

E. DEVILLE,

Surveyor General.

TOPOGRAPHICAL SURVEYS BRANCH,
DEPARTMENT OF THE INTERIOR,
OTTAWA, May 3, 1915.



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TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN

RANGE 1.

(*East outlines.*)—This is essentially a bush country, the timber ranging **14 to 28** from light poplar and scrub in township 14 to poplar ten inches in diameter and in places, as in township 25, some small areas of fine spruce suitable for building and railway uses. A good Government colonization road runs through the Fisher River country from the railways. The soil is variable and could hardly be classified in a general report. There is a good deal of muskeg in places; notwithstanding this fact, however, there is very much rich land, and mixed farming is carried on with great success. The vast extent of hay-slough land and ranging country makes this district suitable also for stock-raising. There is an abundance of fresh water from the small streams; fresh water is also easily obtained by sinking shallow wells. No water-powers are to be found in this district. Only two small streams were noted, namely the Icelandic river in township 23 which flows under ground in crossing the meridian and the Fisher river in section 24, township 28, which is about three chains wide and eight feet deep, flowing at the rate of one-quarter mile per hour. There is some good building stone (limestone) in township 19. The climate is the same as that described for southern Manitoba in the report on townships 1 to 13. There is an abundance of soft wood; in fact, the cutting and shipping of cordwood to the cities during the winter months has become quite an industry. No minerals were located. In townships 26, 27 and 28 game is fairly plentiful, there being moose, deer, caribou, partridges, muskrats and rabbits. It is a peculiar fact that the moose, deer and caribou are more plentiful in this district than in the country north as far as Hudson bay. It is said that these animals come south into the more settled districts to avoid the ravages of the timber wolves so plentiful north of lake Winnipeg and lake Manitoba.—*A. G. Stuart, D.L.S., 1912.*

(*East outline.*)—The surface is timbered with poplar, cottonwood, scrub oak **17.** and willow, with a number of long, narrow tracts of marsh, in some of which is hay and willow scrub. The land is high and the soil of first-class quality.—*A. H. Vaughan, D.L.S., 1874.*

(*Subdivision.*)—This township is suitable for settlement, having, with the exception of a few stony ridges, a good soil for cultivation, and is well supplied with wood for fencing and fuel. The surface is undulating; in some of the low grounds hay marshes occur.—*W. Wagner, D.L.S., 1874.*

The soil in this township is a sandy loam with a subsoil of clay and gravel except upon the ridges which are mostly gravel. The only timber found was in bluffs of poplar and a second growth of poplar along the shores of Shoal lake, which occupies parts of sections 7, 18 and 19. The land in the immediate vicinity of the lake is swampy and alkaline. In general, the township is adapted to mixed farming.—*A. F. Martin, D.L.S., 1902.*

This township is most easily reached by road from Teulon or Stonewall. However, a road runs around the north end of Shoal lake connecting these with a road to Oak Point. The soil is generally a good clay loam with a gravel subsoil in most places. Considerable tracts have been cleared and otherwise prepared for growing grain, especially in the northern row of sections and in section 22, with every prospect of a successful result. As cattle raising is already extensively followed, it would seem that mixed farming would be the most suitable for this township. The township is

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

very slightly rolling and is generally made up of scrub land and hay swamps. Some poplar woods were noticed but the timber is of small size and, generally, is of no great importance. Hay swamps are plentiful in most of the townships and produce large quantities of excellent hay. Surface or swamp water is often found and is mostly of fairly good quality, but good water, however, can easily be obtained by digging wells. There are no streams nor water-powers. The climate is similar to that of central Manitoba. Wood is the only fuel and it will be scarce in a few years. No stone-quarries nor minerals of value were noticed. A few deer and tracks of moose were seen, but generally speaking, game is becoming scarce.—*E. Bray, D.L.S., 1905.*

The north half of this township is chiefly high dry ground, with the exception of a marsh along the shore of Shoal lake, in section 19, and a few small marshes, which were almost dry at the time the survey was being made. It is chiefly covered with small poplar and willow with a few prairie spots. In a few places poplar up to nine inches in diameter occurs, and in the eastern part of the township there is considerable windfall. Section 6 and a part of sections 7, 5 and 8 are timbered with poplar from four to nine inches in diameter. Shoal lake occupies part of sections 7, 18 and 19. Around the east shore of Shoal lake the soil is very wet and several open springs occur. A large swamp occupies part of sections 9, 8 and 17, and there are also large wet swamps in sections 1, 2, 3 and 12. The soil in this township is chiefly black loam on a subsoil of clay, although gravel occurs in a few places, and limestone rock comes very near the surface in places. At the quarter-section corner on the north boundary of section 20, for example, solid limestone was struck in the pits at a depth of five inches, and in a ditch along the road allowance on the east boundary of section 6, limestone was uncovered at a depth of about eighteen inches for a short distance. Some fencing has been done on a small scale in this township. The northeast quarter of section 12 produced a few acres of excellent wheat last year. Stock-raising, however, is the chief occupation of the settlers. Plenty of hay is readily obtained from the marshes which occur in the township.—*W. Christie, D.L.S., 1906.*

(*East outline.*)—The country along this line is generally high, undulating
18. land, and is nearly all timbered with poplar, balm of Gilead and willow, much of which, however, has been killed by fire. The soil is of first-class quality.—*A. H. Vaughan, D.L.S., 1874.*

(*Subdivision.*)—This township is mostly timbered with young poplar which has grown up within the last few years, amidst a large brulé caused by fires in 1871 and 1872. There is some good building timber untouched by fire. The land is high and dry; the soil is a black loam with an average depth of seven inches and a subsoil of clay and gravel.—*W. Wagner, D.L.S., 1884.*

This township will be unfit for settlement until drained, as practically the whole surface was so covered with water that we were unable to proceed with our work.—*A. F. Martin, D.L.S., 1902.*

This township is unfit for tillage as it has a very shallow soil resting on
19. limestone rock. The eastern half is well timbered with poplar up to eight inches in diameter; the western half is all brulé and windfall. The openings in the brulé are muskegs and hay marshes. The surface is rolling.—*W. Wagner, D.L.S., 1884.*

This township, though stony in places, has excellent soil and one settler stated that he had grown fifty bushels of onions on a patch about fifty feet square. He assured me that all kinds of vegetables and grain do remarkably well here. There are two or three large marshes in this township which supply hay and water for the cattle.—*G. A. Grover, D.L.S., 1906.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

This township is unfit for tillage as it has a very shallow soil overlying
20. limestone rock. It is well timbered, with the exception of the southeastern quarter, which is *brulé* and windfall. There is some very fine spruce and tamarack in sections 24, 25, 26, 35 and 36.—*W. Wagner, D.L.S., 1884.*

The surface of this township is rolling. The soil, generally, with the exception of that on the ridges, is a clay loam with a clay subsoil. Fire has destroyed a great deal of valuable spruce timber in this locality; that remaining consists of a few bluffs of scrubby spruce, black poplar, and a dense second-growth of young poplar. Good water may be obtained anywhere by digging a few feet.—*A. F. Martin, D.L.S., 1901.*

The surface of the township is undulating and very stony, with large grass and
21. willow swamps lying between the low, flat, gravelly ridges. These grass swamps or muskegs have a hard firm bottom in most places, and where the water is not too deep, are easily crossed by horses drawing wagons. The soil throughout is very poor, there being from two to six inches of clay and sandy loam with black loam in a few places, and a subsoil of either a hard-pan or a mixture of gravel and sand. The whole of the township has been more or less burned. The original timber was poplar, balm of Gilead and spruce, some of which is still standing green in places, but as a rule there is a scattered growth of poplar five to eight inches in diameter, with a thick growth of small poplar, willow and hazel. These latter have also been burned and are again grown up with a smaller growth. A considerable stream about thirteen feet in width and about three feet deep, the outlet of Oak Island lake in tp. 21-2-Pr., flows out of Deep lake in a general southeastern direction, leaving the township in section 1. A road twenty-five links wide has been cut out by Mr. J. A. Macdonnell for the Immigration Department, across part of this township. It has a terminus at Fisher river and branches to Oak Island lake and Icelandic river, both of which pass through parts of this township. These roads have been traversed.—*H. B. Proudfoot, D.L.S., 1902.*

The Fisher River and Icelandic River road, a branch of the Great Northern
22. highway running north from Teulon, passes through the southerly and easterly parts of this township. The soil is a black and clay loam with a clay subsoil and is suitable for all agricultural purposes. With the exception of the extensive muskegs, the surface is well timbered with poplar, balm of Gilead, spruce and tamarack occurring in about the order named, and are evenly distributed throughout. Good swamp grass can be cut around most of the sloughs, but the surface of the large muskegs is mostly thick moss, and as they are very soft will not be of much use for hay until drained. A large creek, the outlet of Oak Island marsh, passes through the westerly part of the township, flowing in a northeasterly direction and losing itself in the large muskeg on the north boundary. Another creek flows westerly from the large swamp on the east boundary and it is also lost in the same muskeg. The water is all fresh and good. On account of the level nature of the surface, no water-power could be developed. Climate is good, with no summer frosts. There is an abundance of wood for fuel as mentioned above, but no stone-quarries nor minerals. The game consists of moose, elks, a few caribou, and many partridges and prairie-chickens.—*H. B. Proudfoot, D.L.S., 1902.*

There are two large muskegs in the southeastern part of this township; these
23. muskegs extend southerly into township 22, and are the main source of Icelandic river which is met with in this part. The rest of the township is first-class land and is remarkably well adapted to both grazing and farming, the soil being clay loam with a clay subsoil. The surface is undulating and timbered with poplar, balm of Gilead, and some spruce of fair size.—*H. B. Proudfoot, D.L.S., 1902.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

This township is situated about thirty miles in a northwesterly direction from Hnaua post office on the west shore of lake Winnipeg and may be most easily approached by means of the Icelandic river road by way of Frammes and Vidir, the latter place being the nearest post office. The soil in the northerly and easterly sections of this township is extremely rocky, in many places the bare limestone rock appearing at the surface and in other places being only covered by a few inches of light gravelly soil. The southwesterly portion of the township is largely composed of muskeg and hay sloughs, which at the time of our survey were flooded with water from the incessant rains. The only good land in the township is situated near the northwest corner, adjoining the east branch of Fisher river, which passes through sections 30, 31 and 32. The northerly and easterly portions of this township are comparatively high and dry. The southerly and westerly portions are somewhat lower with a drainage to the northwest. The east branch of Fisher river has an average depth below the general surface of about fifteen feet and thus affords good drainage for the adjoining lands. This township like others in the vicinity has been swept by fire at some time during the past few years and consequently no timber of any value was found. The general character of the surface may be described as "brulé," containing a few large, dead, standing stubs and many fallen trees. The growing timber is all very small, from one to three inches in diameter and consists of white and black poplar, scrub spruce, tamarack and willow. A very large amount of natural hay is to be found in the westerly sections of this township, although at the time of my survey it was so inundated as to be inaccessible for cutting. During an average season, however, a very large amount of hay would be available, notably upon sections 9, 10, 15, 16, 21, 17, 18, and 19. Besides the large amount of water occupying the hay lands in the western portion of this township, the east branch of Fisher river, already referred to, is a fine, fresh-water stream about fifty feet in width and eight feet deep in places; its average depth, however, is about three feet and the current is about two miles an hour. A small fresh-water creek also occurs in section 13. No water-power could be developed in this township. Judging from the growth of vegetation in this locality I would say that the climate is quite favourable for the pursuit of general farming. No summer frosts were experienced, and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly warm, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold, forty degrees below zero being about the lowest temperature recorded during the past winter. The fuel supply of this township is limited to the standing dead or fallen timber, which is not too abundant in any portion of the township. The eastern portion of this township is chiefly composed of limestone rock, much of which appears quite bare on the surface and may afford a serviceable quantity of building stone if opened up. On the surface, however, it appears to be of a very shaly and highly weathered variety. No minerals of economic value occur in this township. Small game such as prairie-chickens and ruffed grouse were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1907.*

This township may be most easily approached by means of a wagon road from
25. Hnaua in tp. 22-4-E, the distance being about forty miles. It may also be reached by means of a fairly good wagon road from Fisher River mission, the distance from this place being about twenty-five miles. The soil in this township may be graded generally as second- and third-class, the better land occupying the northwest and northeast corners of the township. Sections 2, 3, 4, 6, 7, 10, and 11 are largely occupied by limestone ridges. Another prominent limestone ridge occupies

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

portions of sections 21, 22, 27, 28, and 34. This township is somewhat broken by the several limestone ridges and by the Fisher river, but otherwise the land may be described as gently rolling. The surface is chiefly covered with poplar and willow scrub, and brulé. No natural hay was found, the nearest local supply being in the township to the north. This township is exceptionally well watered by the east branch of Fisher river and by several small tributary streams. Fisher river passes through sections 4, 5, 9, 16, 15, 22, 27, and 34, while branches of the same pass through sections 11, 12, 13, 14, 23, 24, 26, 27, 35, and also through sections 20, 29, 30, 31 and 32. The water of these streams is of good quality and well suited for domestic use. Besides these streams no water is found in the township except at the north boundaries of sections 31 and 32, which are crossed by the west branch of Fisher river. Little or no surface water is found. In section 22 a rapid occurs on the Fisher river which would afford a limited amount of water-power, the fall of the stream being about ten feet in 300 feet. The climate is similar to that of the other eastern parts of Manitoba though probably somewhat more moist on account of the large lakes both to the east and west. The swamps and smaller lakes freeze over about the middle of November. Snow usually follows within a week or two. The climate seems to be quite favourable to the successful growing of oats, barley, wheat and all the ordinary root crops, for they were successfully grown during this summer, both in this township and at Fisher River mission. An abundant supply of fuel in the form of dead wood is found in this township, though much of it is now soggy. The new forest growth, however, is already replacing that which was destroyed by fire and is large enough to give an ample local supply of fuel. No coal is known to exist. The rock formation being limestone, outcrops of which occur in many places, there is probably any amount of building stone in this township, though as yet no quarries have been opened up. The most important variety of game known in the vicinity is the moose, which is comparatively abundant. Elks are also found and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrrell, D.L.S., 1908.*

(*East outline.*)—Through sections 1, 12, 13, 25 and 36 the line passes through
26. small poplar and jackpine bush. The east boundary of section 24 falls in a tamarack swamp, which extends for a considerable distance to the west but only about half a mile to the east of the line. The soil is a shallow layer of clay and gravel over limestone, except in the swamp mentioned above where black loam is found.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township is accessible by means of a wagon road from Hnausa, in tp. 22-4-E, the distance being about forty-five miles. It is also accessible by wagon road from Fisher River mission, from which it is distant only about fifteen miles. It may also be reached from the latter place by means of small boats or canoes, following Fisher river. However, because of numerous small rapids occurring in this river the wagon road is the preferable route for heavy freight. The soil of this township may be considered as first and second-class, the depth of black loam being in many places as much as eighteen inches over a clay subsoil. The greater part of this township is well suited for general agricultural purposes. The surface is considerably broken by both the east and west branches of Fisher river, but otherwise it may be generally described as gently rolling country, much of which is brulé, other sections being covered by poplar and willow scrub. Several extensive muskegs are found within this township, and occupy portions of sections 1, 4, 5, 10, 11, 12, 13, 14, 15, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34, and 35. Rocky, limestone ridges of about thirty feet in height occur in sections 25, 35, and 36, extending in a northerly and southerly

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

general direction. No timber of any value is found, the original forest having been destroyed by forest fires some years ago. This township is well supplied with a good quality of marsh hay. The chief localities noted are as follows: sections 3, 4, 7, 8, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 33, 35, and 36. The western part of this township is well supplied with good water from two branches of Fisher river which pass in a northerly direction through sections 4, 5, 6, 8, 9, 16, 17, 18, 19, 20, 29, 30, 31, and 32. A small tributary of the east branch of this river also passes through sections 2, 10, 9, and 16. Besides these streams a large amount of surface water exists in the muskegs in several sections of the township and more particularly in the north-west corner. Although a number of small rapids occur at various points on both branches of Fisher river, none are of sufficient fall to afford any considerable amount of water-power. The climate of this locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist because of the proximity of the large lakes both to the east and to the west. The swamps and smaller lakes freeze over about the middle of November. Snow usually follows within a week or two. The climate seems to be quite favourable to the successful growing of oats, barley, wheat and all the ordinary root crops, for these were successfully grown during the past summer both in township 25, range 1, and at Fisher River mission. An abundant supply of fuel in the form of dead wood is found in this township, though much of this is now soggy. The new forest growth, however, is now replacing that which was destroyed by fire, and it is already large enough to give an ample local supply of fuel. No coal is known to exist. The rock formation being limestone which outcrops in a few places, there is probably a considerable amount of building stone, though as yet no quarries have been opened up. No minerals of economic value were found. The most important variety of game known in the vicinity of this township is the moose, which is comparatively abundant. Elks are also found, and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is rather limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrrell, D.L.S., 1908.*

(*East outline.*)—Throughout section 12 and the south half of section 13 the
27. line passes through small poplar and jackpine. The soil in these sections is black loam of about two inches in depth over limestone. In the north half of section 13, and in sections 24, 25 and 36, the line passes through a large muskeg and tamarack swamp, which extends on the west to Fisher river, a distance of about three and one-half miles. To the east of the line it extends in a southeasterly direction for several miles.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township is most easily accessible by means of a wagon road from the mission station at Fisher River Indian reserve, from which place it is distant only about ten miles. It may also be conveniently reached in small boats or canoes by means of Fisher river which passes through the township. The soil of the central and eastern portions of the township varies from first- to second-class, consisting from six to eighteen inches of black loam over clay subsoil, and is well suited for general agricultural purposes, but the western part of the township as well as the north-easterly corner is exceedingly wet, being composed chiefly of muskeg. The surface varies from level to gently rolling except at the southeast corner, where limestone ridges make their appearance. Nearly half of this township is occupied by muskegs; the remainder is covered chiefly by poplar scrub and brulé. A very limited amount of live timber exists along the valley of Fisher river, nearly all of the original forest having been destroyed by fire some years ago. A large amount of good marsh hay is found in sections 13, 14, 15, 16, 22, 23, 24, 25, 26, 27, 33 and 34. This township

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

is abundantly supplied with fresh water, both from the main stream of Fisher river which passes through sections 18, 17, 20, 21, 22, 27, 34, 35, and also from the extensive muskegs. A number of small rapids occur upon Fisher river in its course through the township, the fall of which was estimated to be from three to five feet, so that none of these rapids is sufficient to afford any considerable amount of water-power. The climate of the locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist on account of the proximity of the great lakes both to the east and west. The swamps and small lakes freeze over about the middle of November. Snow usually follows within a week or two. The climate seems to be quite favourable to the successful growing of oats, barley, wheat and all the ordinary root crops, for these were successfully grown both in township 25, range 1, and at Fisher River mission. An abundant supply of fuel in the form of dead wood is found in this township, though much of it is now soggy. The new forest growth, however, is now replacing that which was destroyed by fire, and is already large enough to give an ample local supply of fuel. No coal is known to exist. The rock formation being limestone which outcrops in a few places, there is probably a considerable amount of building stone, though as yet no quarries have been opened up. No minerals of economic value were found. The most important variety of game known in the vicinity is the moose which is comparatively abundant. Elks are also found and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is rather limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrell, D.L.S., 1908.*

(*North outline.*)—In this township the land is gently undulating, consisting
28. of low ridges covered with poplar up to six inches in diameter, alternating with tamarack swamps, muskegs and hay marshes. A small lake occurs in section 5, township 29, range 1. The soil is chiefly black loam over a clay subsoil, but gravel occurs on the north boundary of section 35.—*W. Christie, D.L.S., 1907.*

(*East outline.*)—The muskeg mentioned in township 27 extends into section 1 of this township. Fisher river crosses the east boundary of section 24. The portion of the township south of the river is covered with small poplar, willow and spruce with some swamps and hay marshes. North of the river the timber is larger, poplar up to ten inches in diameter occurring. Some large marshes are found north of the river in sections 24, 25 and 36. This line crosses Fisher River Indian reserve (No. 44). The country here appears well adapted to stock-raising as an abundance of hay can usually be obtained from the marshes. Last year, however, most of the hay land was under water, but it would be an easy matter to drain these swamps into Fisher river.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township adjoins Fisher River Indian reserve and may be most easily reached from the mission station by means of a wagon road, but also by means of small boats or canoes on the river which passes through the township. The soil of the eastern half of the township varies from first- to second-class, and is well suited for general agricultural purposes, but the western half of the township is exceedingly wet and largely composed of muskeg. The surface varies from gently rolling to level; the western half of it, however, is occupied by an immense stretch of muskeg containing wide stretches of open water. The eastern part of the township is chiefly covered with young poplar and willow scrub. A small amount of large timber consisting of spruce and poplar from eight to eighteen inches in diameter is found along the banks of Fisher river, more especially in sections 13, 14, 23 and 24. A large amount of fine marsh hay may be obtained in this township, chiefly in sec-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

tions 1, 2, 10, 11, 14, 15, 16, 21, 22, 23, 24, 25, 26, and 27. The southeastern portion of this township is well watered by Fisher river which passes through sections 2, 11, 14, 13, and 24, while a small tributary flowing through sections 16, 22, 23, and 14 supplies the central part with excellent water. The western half of the township contains an abundance of surface water in the extensive muskegs. Although several small rapids are found on Fisher river in this township, none of them is of sufficient fall to afford any considerable amount of water-power. The climate of the locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist on account of the proximity of the large lakes both to the east and the west. The swamps and smaller lakes freeze over about the middle of November. Snow usually follows within a week or two. The climate seems to be quite favourable to the successful growing of oats, barley, wheat and all the ordinary root crops, for these were successfully grown last summer both in township 25, range 1, and at Fisher River mission. An abundant supply of fuel in the form of dead wood is found, though much of this is now soggy. The new forest growth, however, is replacing that which was destroyed by fire, and is already large enough to give an ample local supply of fuel. No coal is known to exist in the township. The rock formation being limestone which outcrops in several places, there is probably quite an amount of building stone, though as yet no quarries have been opened up. No minerals of economic value were found. The most important variety of game known in the vicinity of the township is the moose which is comparatively abundant. Elks are also found, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrrell, D.L.S., 1908.*

During the period of navigation on lake Winnipeg the best way of reaching
29. this township is to take passage by boat from Selkirk or Gimli to the trading post near the mouth of Fisher river in the Fisher River Indian reserve. From here there is a rough and unimproved trail running northwesterly to the Principal meridian, which it reaches at about the northeast corner of section 12, and thence runs northerly near the meridian. From this trail all of the eastern portion of the township is accessible. A branch from this road leaves the meridian in section 12 and runs westerly through sections 12, 11, 10 and 9 and thence northerly through sections 16, 17, 20 and 29. Light loads can be hauled over this trail, although occasional portages across muskegs are necessary. The trail to lake St. Martin branches from the meridian trail in section 13 and runs northwesterly through sections 13, 24, 26 and 34. It is a pack-trail, never having been cut out for wagons. To reach the western part of the township it is best to follow the Fisher River road up the river to Roger's ranch, from whence a trail runs northwesterly crossing the base line in section 5, and running northerly through sections 5, 8, 17, 20 and 29. A fair-sized load can be taken over this trail with no need of packing at any place. The alternative route for reaching the township is by the Fisher River road from Arborg, the terminus of the Teulon-Arborg branch of the Canadian Pacific railway. This road runs northwest from Arborg, following the Icelandic river to Vidir, and reaches the Fisher river at Hodgson which is situated at the border of the Peguis Indian reserve; from here it follows the Fisher river down to lake Winnipeg. This road is cleared, partly stumped, has some necessary bridges and culverts, is graded as far as Vidir and is well travelled, but, except in the winter time or after a long period of dry weather, is so soft and boggy in many places that it is of little value for freighting. To induce settlers to take up land in this township, good roads are imperative as the natural difficulties of construction are too great for homesteaders to cope with unaided. The Fisher River road should be improved, a bridge built across the river

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.—*Continued.*

at the Principal meridian or some other point between the two reserves and the road extended into the township. The soil is rich and heavy, consisting generally on the higher ground of six to ten inches of humus on a boulder clay subsoil. On the higher ridges there is a preponderance of boulders and sometimes a gravel sand or sandy loam subsoil while in the muskegs there is muck and sometimes peat on a clay subsoil or less often on calcareous shale. The depth of the muck is variable but as a rule is not less than four or five feet. The soil is suitable for various departments of agriculture, such as cattle-raising, dairy farming, gardening and the growth of cereals. Cattle will pasture in the bush when the ground is bare of snow, but need a wide range as the marsh grass is not nutritious. The best pasture is in the open poplar timber where there is an abundance of short sweet grass, leguminous plants and wild strawberries. Cattle killed in the early fall are found in good condition, and the quality of beef is excellent. If stabled they can be kept throughout the winter on native hay. Horses cannot be pastured in the bush on account of the flies. Dairy farming properly managed would likely prove the most remunerative when markets are accessible. Milch cows would need to be stabled during the fly season as well as in the winter to be kept in good condition. The growth of roots, vegetables and small fruits is attended with success. From the richness and moisture of the soil, potatoes and all tap roots reach a great size and are of splendid quality. The growth of cereals is at present doubtful, but would likely prove a success if the land were cleared and drained. The muskeg if drained would make splendid farming land. The surface of the township varies from level to gently rolling and is covered throughout with timber or scrub except where there is open water or open muskeg. There are no hills and the ridges are low and indefinite. The lower land consists of muskegs, swamps, bogs, marshes and small lakes or ponds and occupies about 65 per cent of the area. The greatest extent of muskeg is on the west side of the township. The muskegs generally have their greatest length north and south and drain to the north. They are constant in character, but may be open, scrubby or timbered, may narrow down to be almost a creek or may change into a hay marsh, willow swamp or succession of small ponds. The depth of the surface water varies from a few inches to two feet. Where there is no surface water and the muskeg is fairly dry, the timber is usually dense and there is a heavy growth of moss of two or three feet in thickness which retains the frost and ice underneath till late in the summer. As the amount of water increases and the timber becomes more open, the moss becomes hummocky, the hummocks gathering generally around single trees or clumps of tamarack. On these hummocks grow mossberries or cranberries in great quantities; though they are smaller, their flavour and taste compare favourably with the imported berries, and they sell readily in Winnipeg. Where there is a greater depth of water, there is generally a heavy growth of reeds, rushes and swamp grass. In the larger or more open muskegs there are trembling bogs, where there is little or no surface water, and floating bogs where there is water below the grass roots. In the trembling bogs the grass is short and sparse, and below the grass roots is a great depth of thin slime. While there is a good deal of scrub scattered throughout the township no particular sections could be classified as scrubby. On the muskegs there is a lot of swamp or low birch and there are a number of willow and alder swamps. There is not much underbrush except where the timber has been thinned out by fire; it consists chiefly of hazel and willow. The timber consists of poplar, spruce, tamarack, balsam and birch, about eight inches in diameter. They are fairly evenly distributed over the township except in the south where the timber is chiefly poplar and in the muskegs where it is principally tamarack. The heaviest and densest growth of timber is in the north and central portions of the township. The southern part has been fire-swept and there is a lot of dead timber, both fallen and standing. The best tamarack is found at the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 1.- *Concluded.*

edge of the muskeg; that which grows farther out is as a rule stunted, twisted and often water-killed. There is a plentiful supply of hay throughout the township and an abundant supply in the southwest quarter. It grows around the edges of the muskegs and in a lot of hay marshes and sloughs, but the quality is poor as it is coarse, watery and lacking in sweetness, and oxen and horses fed on this hay seem to derive very little nourishment from it. The water is all fresh, and the supply is both sufficient and permanent. There are no streams and only one or two small creeks. These are in the southeastern part of the township and are two or three feet wide, a few inches deep and almost stagnant. There is a great quantity of surface water, and possibly eighty per cent of the township would be flooded to the depth of an inch or two after heavy rains. There is a good sized lake in section 5, called Swan lake by the Indians. Its shore line is very irregular; it has numerous small islands and is apparently filling up and becoming a part of the surrounding muskeg. Portions of two other lakes, or possibly one, extend over from township 30 into sections 31 and 32. These lakes are in many places difficult to approach on account of the boggy and unstable nature of the shore or land margin. There are no water-powers in the township nor could such power be developed by the construction of dams. The climate is in general cool and damp with short periods in midsummer of extreme heat. The trees were not out in leaf nor had vegetation made any progress till late in June but, when once started, growth is very rapid. Frosts occurred in June and they were quite heavy on the second and third of August. Clearing and draining the land would modify the coldness of the climate. The coldness of the ground, due to the ice held in the moss and the excessive amount of ice-cold water, delays vegetation and keeps the temperature low. The humidity is great and the summer weather generally cloudy and wet, although there are few heavy rains. Wood is the fuel most readily available and it can be procured anywhere in the township. There are no coal or lignite veins, stone-quarries, rock outcrops nor economic minerals. Nearly all varieties of Manitoba game were seen in this township. Rabbit skins are made into blankets by the Indians and moose and deer hides tanned and made into various articles of clothing ornamented with silk work; these have a ready sale.—*R. Neelands, D.L.S., 1912.*

(*East outlines.*)—The meridian first runs along a ridge with
29, 30 & 31. some fair spruce, tamarack and poplar, but soon leaves this and enters muskeg, which continues until approaching lake St. George, where another ridge is encountered, on which is some excellent spruce, poplar and small tamarack, together with a second growth of these and other varieties. The spruce, although scattered, is of fair size, some trees measuring twenty-six inches in diameter. Lake St. George was found to be shallow, especially at the southern end. The water is good and fish fairly plentiful, consisting of goldeyes and jackfish.—*E. W. Robinson, D.L.S., 1910.*

(*North outlines, ranges 1 to 7.*)—The country throughout these ranges is to all
32. intents and purposes muskeg. There are narrow ridges running approximately north and south, but they are only a few feet above the surrounding country, and, as the soil appears to be very retentive of moisture, even these are usually wet. Moose are very plentiful and, being little hunted, are very easy to obtain. Mantagao river is a stream from five to ten chains wide and about fifteen feet deep with a sluggish current. It rises in some large muskegs to the south and pursuing a very meandering course flows into Sturgeon bay of lake Winnipeg.—*E. W. Robinson, D.L.S., 1910.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.

(*South outline.*)—Sections 1, 2, 3 and 4 are high, undulating land with
17. occasional bluffs of poplar and scattered oak. There are hay marshes in sections 4 and 5. The soil is of first-class quality. Sections 1 and 2 are in Shoal lake and the surrounding marsh.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township adjoins the western shore of Shoal lake and is adapted to settlement as it has a black loam soil. The township is about half prairie and half wood land; the timber consists principally of poplar. There are extensive hay meadows along the borders of the lake.—*W. Wagner, D.L.S., 1872.*

Nearly one-half of this township is occupied by Shoal lake, which divides it
18. into two parts. The portion lying to the west of the lake is well adapted to settlement and is generally covered with bluffs of small poplar and clumps of willow, but most of the timber has been injured by fire. There are a number of small hay marshes. The surface is rolling and the soil is of first-class quality. That portion lying east of the lake is almost all timbered, consisting generally of poplar and willows with a small percentage of balm of Gilead and scrub oak. The timber in some places has been destroyed by fire. There are a number of small hay marshes, but the surface is generally dry and the soil of good quality.—*W. Wagner, D.L.S., 1884.*

The greater part of this township is covered by Shoal lake, the shores of which are very flat and swampy. The soil and water in the vicinity of the lake are very alkaline, but elsewhere in the township the soil and subsoil are composed of good clay loam and clay, respectively. There is no timber of any value in this locality.—*A. F. Martin, D.L.S., 1901.*

This township is easily reached by way of Teulon on the Canadian Pacific railway, or by way of Oak Point on the Canadian Northern railway. The soil is of fair quality, but being only a few inches in depth with a subsoil of gravel, the township would not appear to be a desirable one for raising grain. However, a number of settlers have incurred the expense of removing the stones from their land, and the result in crops of grain is said to be satisfactory. Along and near Shoal lake, however, the land is better suited for cattle raising. Hay is found in large quantities in all sections lying near the lake and occasionally in other parts of the township. Running or surface water is scarce, but good water is easily obtained by digging wells. Timber of any value is scarce and was noticed on sections 13, 14, 33 and 34. It is composed of poplar and some oak of fair size. In all other sections the land is mostly covered with scrub. There are no water-powers, and no stone-quarries nor minerals of value were noticed. Game is generally scarce.—*E. Bray, D.L.S., 1905.*

About one-third of this township is occupied by Shoal lake, which crosses the township from north to south. Along the west boundary of the township sections 30, 19 and 18 are swampy with bluffs of poplar and willow. Sections 7 and 6 are drier, lightly timbered with poplar and willow, and have numerous patches of prairie and hay land. The east half of sections 6 and 7 and the fractions of sections 5 and 8 on the shore of the lake have formerly been timbered with heavier timber which has been mostly destroyed by fire. Near the shore of the lake in sections 21, 20, 29 and 30 is a fringe of woods, principally poplar and cottonwood from five to ten inches in diameter, which would furnish some good building timber. All along the shore is a strip of land of varying width from which a considerable quantity of hay is obtained. A considerable quantity of hay is also obtained from marshes and prairie patches on almost every section on the west side of the lake. Of the portion of the township east of Shoal lake, approximately the north half is high, dry land. A strip along the lake varying in width from one-half to three-quarters of a mile is timbered with poplar

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

from four to eight inches in diameter, while the remainder is covered with scrub poplar and willow, much of which has been killed by fire. A few marshes producing hay occur in this part of the township. The settlers on the northwest and northeast quarters of section 24 have begun cultivating the land to some extent and good crops of oats were grown last year. The south half of the portion of the township east of Shoal lake is lower and has more marshes and muskegs, open springs occurring in places. Hay is obtained from a strip of land along the shore, but very little is to be obtained elsewhere in this part of the township. The soil throughout is chiefly black loam to a depth of six to eight inches on a clay subsoil. Ducks were plentiful around the lake at the time the survey was being made, and deer were reported to be quite plentiful in the vicinity.—*W. Christie, D.L.S., 1906.*

The water of Shoal lake has been receding rapidly during the last few years. There is now quite a large area of new land along the east shore where many hundred tons of hay are cut yearly by the settlers living in the vicinity.—*G. A. Bennett, D.L.S., 1912.*

The soil in this township is very shallow and generally unfit for tillage. The
19. timber has all been destroyed by fires, excepting a small quantity in the south-eastern portion of the township and that is only large enough for fencing purposes.—*W. Wagner, D.L.S., 1884.*

Shoal lake occupies a considerable portion of the southwest corner of this township. The lands in the immediate vicinity of the lake are flat and mostly swampy, making, however, fairly good hay lands. The soil is a good clay loam with a clay subsoil. The timber consists mostly of poplar brulé, dense second-growth poplar and several bluffs of green poplar along the lake shore.—*A. F. Martin, D.L.S., 1901.*

The surface of this township is rolling and generally covered with poplar and
20. willows, much of which, however, has been destroyed by fires. There are a great number of hay marshes and muskegs, with reeds and rushes, scattered throughout the township. The soil generally is very shallow, but of good quality being a black loam.—*W. Wagner, D.L.S., 1884.*

This township is almost entirely covered with large swamps, muskegs, and a dense second growth of poplar too small to be of any value. By draining, most of the swamps could be converted into fine hay sloughs. The soil is a good clay loam with a subsoil of clay.—*A. F. Martin, D.L.S., 1902.*

Oak Island marsh occupies a large portion of the central area of this town-
21. ship. It has very low shores and a wide strip of muskeg or marshy margin, growing very tall rushes and grass in fairly deep water. The surface of the township is mostly undulating, changing to rolling in the northeasterly part. Oak Island marsh is connected by marshes and grass swamps with the marsh, called in the old surveys Bissonette's lake or marsh, which is shown in the northwest corner of the township. The soil throughout is poor and very stony. There is sandy loam and clay loam to the depth of two or three inches with a gravel and hard-pan subsoil. The northeast quarter of the township has some very fair timber, there being poplar, spruce and balsam of Gilead up to twelve and fourteen inches in diameter. The remainder of the area has been more or less burned at different times, and the timber destroyed, leaving only scattered poplar, in some places, and some areas of fair-sized timber. All the burned areas have been overgrown with a thick growth of small poplar and willows, which again have been burnt in some places. The stream, thirteen feet wide and three feet deep, which forms the outlet of Oak Island marsh, crosses

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN,

RANGE 2.—*Continued.*

the east boundary of the township in section 24. A road twenty-five links wide passes through the eastern part of this township.—*H. B. Proudfoot, D.L.S., 1902.*

No settlement has taken place in this township. Part of the land is now suitable for farming but draining is necessary to render extensive farming and road-making practicable.—*G. A. Bennett, D.L.S., 1912.*

This township contains much excellent land, the northwesterly sections in
22. fact being the only land that would not come under the head of first-class.

It is fairly well timbered throughout with poplar, balm of Gilead, spruce and tamarack, all of fair size. No streams are met with, but there are several large sloughs of fresh water. The Fisher River road, laid out by the Swamp Lands Commissioners, passes through the township.—*H. B. Proudfoot, D.L.S., 1902.*

The township is intersected from northwest to southeast by the Fisher River
23. road, cut out by the Swamp Lands Commissioners. This road has been cut out only, no grading being done, but some of the sloughs have been corduroyed. The ridge, forming the watershed between the north and south branches of Fisher river passes diagonally through the township, and the rock in some of the sections is very near the surface; but as a rule the land is first-class. Where the surface has not been burned it is timbered with spruce, poplar and balm of Gilead; where burned it has been overgrown with small poplar and willows, with good hay land interspersed. The soil is generally a black loam with clay subsoil.—*H. B. Proudfoot, D.L.S., 1902.*

This township is situated in a northeasterly direction and about thirty-six
24. miles distant from Hnaua post office, on the shore of lake Winnipeg, and may be most easily approached by means of the Icelandic River road by way of Framnes and Vidir; the latter is the nearest post office. The character of the soil in the more easterly portion of this township, particularly along the valley of the east branch of Fisher river, is that of a black sandy loam with clay subsoil, while farther west the limestone rock again makes its appearance and is in many places sparingly covered by light sandy clay and gravel. Along the valley of the east branch of Fisher river, which passes through sections 3, 10, 15, 14, 13, 24 and 25, the soil may be described as first-class and well suited for agricultural purposes. The surface of this township is nearly level with slight drainage toward the east and northeast. Through the northwest section runs a limestone ridge and the southwest portion is swampy. No growing timber of any consequence was found in this township, the whole surface having been burnt over recently. The country may consequently be generally described by the term *brulé*, in which some tall standing stubs occur and many fallen trees. The growing wood, which is chiefly white and black poplar, is very small, from one to three inches in diameter. A large quantity of marsh hay occurs, particularly in some of the northeasterly sections adjoining the river. A considerable amount of hay is also found in sections 2, 3, 10 and 11 as well as in several of the most westerly sections. Besides a large amount of surface water, which is found in the hay marshes throughout the various sections, the southeasterly and easterly part of the township is well watered by the east branch of Fisher river, a fine fresh-water stream of about fifty feet in width and an average of three feet in depth. No water-power could be developed in this township. Judging from the growth of vegetation noted in this locality I would say that the climate is quite favourable for the pursuit of general agriculture. No summer frosts were experienced. and during the past season the weather was extremely wet and productive of great growth. Occasionally

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

the summer temperatures are exceedingly high, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold, forty degrees below zero being about the lowest temperature recorded during the past winter. The fuel supply of this township is mostly limited to the standing dead or fallen timber, which is none too abundant in the western portion of the township, although the eastern sections are fairly well supplied. No stone-quarries have been opened in this township, but as the formation is that of limestone, although much weathered or broken on the surface, it is quite possible that if opened up to any considerable depth a serviceable quality of building stone might be obtained. Other than limestone, no minerals of economic value are known to occur in this township. Small game, such as prairie-chickens and ruffed grouse, were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1908.*

This township may be reached by a wagon road either from Hnaua and Vidir
25. or from Fisher River mission, the distance from the latter place being about twenty-five miles and that from Hnaua about forty-five. It may also be reached by means of small boats or canoes on Fisher river, but as numerous rapids occur upon this stream the wagon roads are preferable for heavy freight. Vidir is the most convenient post office, mails reaching there twice a week. In the west and north portions of this township the soil is chiefly first-class, averaging eight inches of black loam upon clay subsoil, and is well suited for general farming purposes but in the south and east the soil is more shallow and rocky with only from two to six inches of loam upon limestone rock or gravel. This township is chiefly covered with poplar and willow scrub, but considerable tamarack is found in the marshy lands, and jackpine upon the rocky ridges, of which there are several in the various sections of the township. The surface generally is, however, comparatively level, the ridges ranging from fifteen to fifty feet in height. Little timber of any value is found, the country having been swept by fire some eighteen or twenty years ago. A few large tamarack occur in sections 16, 21, 30 and 31, and spruce in sections 3, 4, 18, 19, 30 and 31, but not in sufficient quantities to be of any commercial value. An abundance of marsh or slough hay is found in various parts, notably upon sections 9, 12, 13, 14, 15, 16, 21, 22, 25, 28, 29, 33, 34, 35 and 36. This township is well supplied with good fresh water by the west branch of Fisher river and some of its smaller tributary streams. The river passes through sections 7, 17, 18, 20, 29, 28, 33 and 34 and small branch streams pass through sections 7 and 32. A large wet slough occurs in parts of sections 11, 12, 13 and 14, this also affords a local water supply. The average width of Fisher river through this township is about one chain, the depth is about three feet and the estimated rate of current two miles per hour. As the rock formation of the country is limestone, the water of both sloughs and streams is hard but good for drinking purposes. Though some small rapids occur upon Fisher river, none is of sufficient fall to furnish any considerable amount of water-power. The climate is similar to that of other eastern parts of Manitoba though probably somewhat more moist because of the proximity of the large lakes both to the east and west. About the middle of November the swamps and smaller lakes freeze over and snow usually follows within a week or two, though sometimes earlier. The climate is not unsuited for the successful growing of oats, barley, wheat, and all of the ordinary root crops and these were successfully grown during the past summer both in township 25, range 1, and at Fisher River mission. An abundant fuel supply in the shape of dead wood is found in this township, although much of it is now soggy and falling to decay. The young new forest growth is, however, already replacing that

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

which was destroyed by fire and is even now large enough to afford an ample local supply of fuel. No other form of fuel is known to occur in the township. As the rock formation is limestone, which outcrops in many places, there is likely to be any amount of building stone in this township, though as yet no quarries have been opened up. No minerals of economic value are known to exist. The most important variety of game found is the moose which is comparatively abundant. Elks are also found and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrrell, D.L.S., 1908.*

This township may be reached by wagon road either from Hnausa and Vidir, **26.** or from Fisher River mission station on the south side of Fisher bay on lake Winnipeg; it is much nearer the latter place, the distance from Fisher bay being only about twenty miles, whereas the distance to Hnausa is at least twice as great. It may also be reached by means of canoes and small boats following Fisher river, which passes through sections 1, 2, 3, 11 and 12 of this township, but on account of the occurrence of numerous rapids upon this river the wagon road is the preferable route for the transportation of heavy freight. The soil is composed chiefly of black loam on the surface which varies in depth from four to eight inches and in most cases this is underlain by clay which in some places contains gravel and boulders. In sections 13, 14, 23 and 24 there is a large outcropping of limestone rock, barely covered in many places with a thin coating of soil. The general character of the surface is that of a gently rolling country, but limestone ridges of about twenty feet in height occur in sections 13, 23 and 24, as well as in sections 31 and 34. A large percentage of the surface is composed of wet muskegs, with open water in some places, between which the land is as a rule covered with scrub and *brulé*. No large live timber now exists in this township, most of it having been cut some years ago, what remained having been destroyed subsequently by forest fires. A very considerable amount of hay may be found, the best localities being sections 14, 23, 24, 27, 28, 33 and 34. More or less marsh hay of a coarser quality exists in many sections about the shores of the muskegs. This township is well supplied with good fresh water from the west branch of Fisher river and several small tributary streams as well as by the large amount of surface water in the numerous muskegs. No water-power exists in the township. The climate of the locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist because of the proximity of the large lakes both to the east and west. About the middle of November the swamps and smaller lakes freeze over and snow usually follows within a week or two. The climate seems to be quite favourable to the successful growing of oats, barley, wheat, and all the ordinary root crops, for these were successfully grown during the past summer both in township 25, range 1 and at the Fisher River mission station. An abundant supply of fuel in the form of dead wood is found in this township, though much of this is now soggy and falling to decay. The new forest growth, however, is already replacing that which was destroyed by fire and is large enough to give an ample local supply of fuel. No other form of fuel is known to occur in the township. As the rock formation is limestone, which outcrops in several places, there is probably any amount of building stone in the township, though as yet no quarries have been opened up. No minerals of economic value are known to exist. The most important variety of game known in the vicinity is the moose, which is comparatively abundant. Elks are also found and black bears are not uncommon.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrrell, D.L.S., 1908.*

This township may be most easily approached from Fisher River mission station either by means of small boats or canoes upon Fisher river or by use of wagons on a road which is bad under the most favourable conditions. The distance to this township from Fisher River mission is about fifteen miles. It may also be reached by wagon road from Hnausa and Vidir; this road is fairly good, but the distance to be covered is very much greater, being about fifty-five miles. The soil may be considered as second- and third-class, the best of it having not more than six inches of black loam upon a clay subsoil, but much of it is only from three to four inches in depth upon gravel or bed rock. The general character of the surface may be described as gently rolling with occasional rocky ridges, intercepted by extensive muskegs. With the exception of these the greater part is covered with poplar scrub. In sections 7, 18, 19, 20, 29, 31 and 33 there is a considerable amount of large timber consisting chiefly of spruce and poplar ranging from four to eighteen inches in diameter, and also some jackpine ranging from eight to twelve inches in diameter. More than one-third of the surface is occupied by muskegs which are as a rule too soft and wet for the production of hay, but a considerable amount of good marsh hay was found in sections 9, 16, 24, 32, 33 and 35. Although this township is adjacent to Fisher river, only a small branch of that stream passes through any portion of it. This stream flows through sections 14 and 11, discharging the waters of a large muskeg covering the central and southeastern part of the township. Abundance of surface water, however, exists in almost every section and is of a sufficiently good quality for domestic purposes. No water-power exists. The climate of the locality is similar to that of the other eastern parts of Manitoba, though probably somewhat more moist on account of the proximity of the large lakes both to the east and west. About the middle of November the swamps and smaller lakes freeze over and snow usually follows within a week or two. The climate seems to be quite favourable for the successful growing of oats, barley, wheat and all the ordinary root crops, for these were successfully grown during the past summer both in township 25, range 1, and at Fisher River mission station. An abundant supply of fuel in the shape of dead wood is found, though much of it is now soggy and falling to decay. The new forest growth, however, is now already replacing that which was destroyed by fire and is large enough to give an ample local supply of fuel. No other kind of fuel is known to occur in the township. The rock formation being limestone which outcrops in several places, there is probably any amount of building stone in the township, though as yet no quarries have been opened up. No minerals of economic value are known to exist in the township. The most important variety of game known in the vicinity is the moose, which is comparatively abundant. Elk are also found and black bears are not uncommon. Timber wolves are reported to exist, though no signs of them were observed. Of feathered game the supply is very limited, being confined to a few ruffed grouse, spruce-partridges, prairie-chickens and ducks, the last named being very scarce.—*J. W. Tyrrell, D.L.S., 1908.*

This township consists of a series of low, flat ridges, covered with poplar and spruce with here and there a few birch and jackpine, alternating with tamarack swamps, marshes and hay lands. A small lake, which I named Colonsay, occurs in sections 33 and 32. The soil is chiefly black loam on clay subsoil, but limestone occurs on the north boundary of section 34, and drift boulders are quite plentiful on all the dry land.—*W. Christie, D.L.S., 1907.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

There is a trail to this township from the Peguis Indian reserve. From Henry Hope's lot in the reserve on Fisher river, it runs northwesterly to this township, entering at the southeast corner. Continuing in the same general direction it traverses the township through sections 1, 11, 14, 22, 27 and 34; a branch runs down from about the centre of section 22 to the centre of section 15. This trail is cut out wide enough for wagons and follows the highest and driest land available, but it is only a rough bush trail, low and wet in many places and in some so soft and boggy that it is a very difficult matter to haul over them even an empty wagon. The Peguis Indian reserve may be reached either from Arborg or from the Fisher River mission. The latter route offers the shortest land haulage and the best road. This part of the Fisher river road has no very soft places and in dry weather is a very fair road. The former route, from Arborg, is in a poor condition. The road in many places is very rough with stumps and stones and in others is so soft and boggy that even unencumbered horses are liable to get mired. This road from Arborg to Fisher bay, known as the Fisher River road, is well located and if it were properly improved would greatly facilitate the settlement of all this district. Many miles of the road allowances will be useless for roads till some time after the townships are thoroughly drained and even then would not make good roads without extensive grading and ditching. The soil consists generally of from four to eight inches of humus on a clay subsoil. Stones and boulders are common, and the ridges are very stony. In the muskegs it consists of muck from one to four feet deep on a clay subsoil. It is suitable for mixed farming. Under present conditions cattle-raising would be the most profitable and safest branch of agriculture to follow. The surface of the township varies from level to gently rolling. There are no elevations of more than a few feet, no hills, ravines or valleys. It is timbered throughout its extent except where it is open water or open muskeg. Scrub is found everywhere with the timber, but no part of it is exclusively scrubby except small areas in swamps or at the edge of marshes and muskegs. The timber throughout the township is small. Poplar is the most common variety on the higher ground and, on account of the fact that the township has been repeatedly fire-swept, is in some places new growth and in others small trees averaging three inches in diameter. Here and there are found clumps which have escaped or lived through the fire and in which the trees have a diameter up to two feet. Spruce is found everywhere. On the higher land it is small second growth. The best is found on the low ground between the ridges and the muskegs. The average size is eight inches in diameter, but in groves that have escaped the fires it is found up to twenty inches. Tamarack of an average diameter of eight inches is found in the muskegs, and in the more open muskegs there is a good deal of small scrubby tamarack. There is a plentiful supply of it in the township. There is not much birch and what there is is small and scrubby. It has suffered from fire and only occasionally are trees of any size found. Small jackpine grows on the ridges. It is most plentiful and the largest in size is found in the central portion of the township and along the base line. The scrub consists mostly of willow, alder, hazel, saskatoon and cranberry. A small patch of the silver-berry (*Elæagnus argentea*)—all that was seen during the season—was noticed. Low-bush cranberries in great quantities were found growing on the moss hummocks in the muskegs. They are large in size and excellent in taste and quality. There is a plentiful supply of hay in the township. It is found at the edges of the muskegs and marshes and in small hay ponds. To the east this township touches on the hay grounds of the Indian reserve. The quality is not very good, the hay being rather coarse and watery and often sour. The water throughout the township is fresh, and the supply is both sufficient and permanent. There are no streams. There is a lake of considerable size, known as High Rock lake, situated in and about

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

section 28. The shore of this lake is for the most part marshy and the bottom is soft and boggy. There is also a smaller and shallower lake on the east boundary of sections 17 and 20, and from this lake to the north and south there is a chain of small lakes and bog holes. There is a small lake about the centre of section 10. All of these lakes are apparently filling up. The surrounding marsh or muskeg grows over them little by little. At the water's edge there is generally three or four feet of thin turf floating on the water, supported by moss and scrub roots, and this is followed by floating bog stretching back from the water often as far as four or five chains. About seventy-five per cent of the township is under water from the depth of a few inches to several feet but the remainder of the township is not liable to be flooded. There are no water-powers, nor could such power be developed by the construction of dams. The climate would appear to be rather cold and wet. Rains were frequent and frosts severe enough to form one-fourth of an inch of ice were common during the time of survey. It is likely that summer frosts would be liable to occur. The fuel most readily available is wood, which can be procured anywhere in the township. No coal nor lignite veins were seen. There are no stone-quarries. No minerals of any kind were found. Moose are quite plentiful and there are some elks and small deer, also bears. Rabbits and squirrels are numerous. Geese and ducks do not nest in the township but sometimes alight in their passage over. Two varieties of grouse are common. Of fur-bearing animals the muskrat is the most important. Wolves, foxes, otters, minks, skunks and wolverines are scarce.—*R. Neelands, D.L.S., 1912.*

On account of a wide and deep muskeg on the easterly side of this township, **29.** extending to the north into township 30 and to the south into townships 28 and 27, it cannot be reached directly from the east through range 1. As the ridges in this district run in a general way in a northerly and southerly direction, it is usually possible by going far enough to the south to find a ridge, fairly free from swamp and muskeg, which reaches the neighbourhood of the desired point to the north. From Henry Hope's lot in the Peguis Indian reserve there is a trail running northerly through townships 27 and 28 to township 29, range 2, crossing the base line in the west half of section 3. This trail was made and used during the survey of the township. Loads of half a ton in the dry season can be hauled over it. The Peguis Indian reserve is reached from Arborg, the terminus of the Teulon-Arborg branch of the Canadian Pacific railway, by a road which runs northwesterly through Vidir and Hodgson; thence it follows the Fisher river down to Fisher bay. This road is well travelled and well defined and has some improvements, such as a few mud grades and some bridges, but except after a long period of dry weather or in the winter time, it is so soft and boggy for most of its length that it is of little value for freighting. The higher portions of it are very rough and stony, and there are many places so soft and wet that it is a very difficult matter to haul even an empty wagon over them. An alternative route is by boat from Selkirk or Gimli to the Fisher river, and thence following the Fisher River road to the Peguis reserve. Inside the township the supply trail used for the survey ran north through section 3 to the centre of section 10, thence northwest to the southwest corner of section 17 and thence north to the northwest corner of section 21. From the southeast corner of section 17 a trail was cut running westward to the west meridian outline through the southerly portion of sections 17 and 18. The soil consists generally of five to nine inches of humus on a clay subsoil. The ridges are as a rule very stony with a gravel subsoil or gravel mixed with sandy loam. Some of the ridges are rocky, a calcareous shale with little or no surface soil, but with the rock on top soft and friable. In the muskegs the soil consists of an average depth of five or six feet of muck on a clay or rock subsoil. The muck, however, is not of a uniformly good quality. It is sometimes mixed with clay and is often

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Continued.*

more or less slimy in character and very rarely and in small patches only, alkaline. It is suitable for various departments of agriculture or in general for mixed farming. There is sufficient pasture for cattle but the marsh grass is not nutritious and they therefore need a wide range. There is a scarcity of short sweet grass and leguminous plants. The flies and mosquitoes are hard on cattle and especially hard on horses. Improved grasses and fodder plants could easily be grown. Potatoes and all tap-roots would grow well on account of the richness and moisture of the soil. Barley could be grown and also feed oats, but wheat would not prove a success till the land is drained. The muskegs if drained would make good farming land. The surface of the township varies from level to rolling with a few small hills and some rocky ridges, and is covered throughout its extent with timber or scrub except where there is open muskeg. The two easterly tiers of sections together with sections 22, 27 and 34 are part of a large muskeg which drains to the north. There are other smaller muskegs and about sixty per cent of the township is muskeg or swamp. There is no part of the township that is exclusively scrubby. The scrub consisting mostly of underbrush is densest where the timber is most open. The size of the timber is very variable. There is a larger proportion of small timber from two to ten inches in diameter than of heavy timber from ten to twenty inches in diameter. The kinds of timber found in order of their importance are spruce, poplar, tamarack, jackpine, balsam and birch. The best and heaviest timber is found in the northwest quarter of the township and especially in sections 29, 30, 31 and 32. Jackpine is found to the south and centre of the township. It averages from three to six inches in diameter. The birch is scarce and only occasionally attains any size. The balsam is confined to the northwest quarter of the township while the poplar, spruce and tamarack are found throughout the township. Islands of good-sized poplar and spruce occur in the large muskegs in the eastern part of the township. Of underbrush there is a great deal of alder, willow, swamp birch and hazel, some scrub oak, ground hemlock, ash, wild plum, saskatoon and cherry. There is a plentiful supply of hay growing around the edges of the muskegs and in small hay marshes and sloughs. It is generally mixed with scrub and the hay is of poor quality, being coarse, watery and lacking in sweetness. The hay grounds could easily be improved by clearing the scrub and draining off the water. The water throughout the township is fresh and the supply is both sufficient and permanent. There are no lakes of any size and no rivers. The depth of the surface water in the muskegs and swamps is very variable and depends largely on the rainfall. In floating bogs there is little or no surface water, the grass growing in a thin, tough crust of turf on top of the water. The open bog holes and channels, which are sometimes two or three acres in area, apparently follow the line of drainage. A good-sized creek flows north easterly through the township. It is from twelve to twenty feet wide and from two to four feet deep. The current is very sluggish and the volume of water inconsiderable. It has two small tributaries, one flowing through the centre of section 7 and the other southeasterly through sections 30, 19 and 17. In section 22 this creek flows into the muskeg and in some places is lost underground and in others appears as a network of small lakes and bog holes. It renders this part of the muskeg rather difficult to traverse. The land is not liable to be flooded, although after a heavy rain about seventy per cent would be under water, but the excess soon drains off. There are no falls and no available water-power. There are some slight rapids on the above-mentioned creek, but there is not head enough to develop any power, even by the construction of dams, on account of the general flatness of the country. The climate in general is cold and wet. The excessive amount of ice-cold water, and the fact that the frost is long held in the ground by excessive deposits of moss, peat and muck delays growth in the spring and keeps the temperature low at night. On August 2 there was a severe

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 2.—*Concluded.*

frost, freezing the swamp grass and wild fruit in part. There was a great deal of dull, wet weather but few heavy rains. Wood for fuel can be procured easily any place in the township. No coal nor lignite veins were seen. There are no stone-quarries. Limestone might be quarried from some of the outcrops of calcareous rock. There are rock ridges in sections 3, 4, 5, 8, 9 and 10, and occasional outcrops in other places. Some ferruginous limestone, ferrocalcite and impure red ochre were seen in sections 4, 5 and 8. There is a curious rock outcrop in the southwest quarter of section 5. It rises to a height of about forty to fifty feet above the surrounding muskeg and is split at the highest point into a steep canyon. It is a well-known landmark to the Indians who call it "The High Rock." No minerals of economic value were found in the township. Moose are plentiful and elks scarce. There are few bears. Of game birds two varieties of grouse, commonly called partridges, were often seen. There are quite a few rabbits, also some otters and many muskrats.—*R. Neelands, D.L.S., 1912.*

RANGE 3.

- (*South outline.*)—The land along this line is a high, dry, undulating prairie with bluffs of poplar and an occasional hay swamp. The land is of second-class quality.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—This township is well suited for settlement as it has an undulating surface, good soil, and a fair supply of timber for fencing and such buildings as would require pieces of no great size. There are no streams, but water can be obtained by digging.—*W. Wagner, D.L.S., 1872.*

- (*East outline.*)—The country traversed by this line is alternately prairie and poplar bush. There is a marsh which intersects this line in sections 24 and 36. The soil is of first-class quality.—*M. J. Charbonneau, D.L.S., 1883.*

(*Subdivision.*)—This township is situated between lake Manitoba and Shoal lake. It is well wooded with numerous bluffs of poplar. The soil is a black loam with sandy or gravelly subsoil. The eastern part is rather low and wet, but as a whole it is particularly adapted to stock-raising.—*W. Wagner, D.L.S., 1883.*

The soil of this township is all of third-class quality and about twenty-five per cent of the surface is hay meadow. There is enough timber remaining for fuel purposes for a few years to come. There are a few settlers in the township who live by ranching on a small scale and fishing in lakes Manitoba and Winnipeg. Only enough farming has been done yet by the settlers to provide garden material for their own necessities.—*C. F. Aylsworth, D.L.S., 1908.*

- (*South outline.*)—The country in the vicinity of this line is very well adapted to stock-raising on account of its rich hay lands and its access to the lake, where good water may be obtained the year around. There are quite a number of settlers in township 19.—*A. F. Martin, D.L.S., 1902.*

(*Subdivision.*)—On an average, the land in this township is only of second-class quality. The township excels in good meadow land, which renders it well adapted to mixed farming. There is no large timber, yet enough will be found for building purposes.—*W. Wagner, D.L.S., 1883.*

This township can be easily reached by roads from Oak Point. Its surface, which is slightly undulating, is mostly covered with scrub and hay swamps with scattered tracts of scrubby prairie. Timber is only found in very few places, and it is so small as to be valuable only to settlers for fuel and building purposes. The soil is of fair

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

quality, but shallow and stony with a gravel subsoil; in general it can only be rated as second-class. Grain could undoubtedly be grown, but the excellent growth of hay upon swamps, which are very numerous throughout the township, renders cattle raising and dairy farming the more suitable occupation. There are no streams in the township; the only reliable source of water for stock is the ponds and lakes, as surface water is scarce and not good and wells are not reliable. No stone-quarries nor valuable minerals have been found. Ducks are plentiful, but other game is scarce.—*E. Bray, D.L.S., 1905.*

The township is covered chiefly with small poplar and willow with a few oak, and has numerous marshes and sloughs; most of the latter were almost dry at the time the survey was being made. The homestead land has almost all been taken up, chiefly by Icelanders who devote their attention to stock-raising and dairying. There is plenty of grazing land almost all over the township, and the marshes produce plenty of hay which can be harvested in a dry season. Stock is not allowed to winter in the open as is done in the provinces farther west, but is stalled and fed all winter. I saw no attempt being made at grain-growing in this township. Most of the settlers grow a few potatoes and other vegetables for their own use; but beyond that nothing has yet been done towards cultivating the land. Shoal lake extends about three-fourths of the way across the township, entering at the southeast corner and extending northwest to section 29. There is a strip of good hay land of varying width almost all along the shore of this lake. There is practically no timber of any value, except for fence posts, etc., to be found in this township. A very limited amount of timber suitable for building might be obtained in different parts of the township, the best being on Oak island in Shoal lake, in sections 2 and 11. There is plenty of wood to provide fuel for the settlers' use for some time to come. The soil of the greater part of the township is black loam to a depth of from three to eleven inches on a subsoil of clay. The whole township is covered with drift boulders. Most of the settlers have obtained good water by digging wells, although in some wells the water is slightly alkaline.—*W. Christie, D.L.S., 1906.*

20. The western portion of this township is rather low, and is occupied by several lakes, which, during high water in the spring form one large lake and extend for miles beyond the northern boundary of the township. The eastern portion is high land, covered with poplar and willow. The soil is a black clay loam about six inches deep with a subsoil of white clay mixed with fine gravel.—*W. Wagner, D.L.S., 1884.*

The westerly half of this township is a succession of deep sloughs and lakes partly filled with reeds. The easterly part is covered with a thick second growth of poplar in the form of brulé and dense underbrush. By proper drainage this township would yield a great quantity of hay, as the soil is of good quality and it is well adapted to mixed farming.—*A. F. Martin, D.L.S., 1902.*

Access to this township is easy by existing trails or roads from Oak Point. The soil is of good quality but is, generally, only a few inches in depth and has, mostly, a gravel subsoil. It is also stony and as the removal of these stones would be expensive the township, at present, is better suited for cattle raising and dairy farming than for any other purpose. The land is very nearly level and is composed of scrub land, hay meadows, marshes or ponds and poplar woods, the scrub land being the greatest in area, and the others in their relative proportions as written. The timber is mostly in the northerly row of sections and large ponds or small lakes occupy most of the southwesterly corner of the township. Elsewhere is found scrub and hay meadows generally. Hay is plentiful and is distributed fairly over the township. The

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

surface water, as found in marshes, etc., is mostly fresh and the supply permanent and sufficient. There are no streams and no water-powers. The climate is suitable for any kind of farming as it is carried on in Manitoba. Wood is the only fuel in this locality but is not plentiful, except in the northerly row of sections. No stone-quarries nor minerals of any value were noticed. Some deer were seen, but generally, game of all kinds is getting scarce.—*E. Bray, D.L.S., 1905.*

The west half of this township contains a considerable amount of low swampy land, together with bluffs of poplar and willow. In the northwest quarter of the township some of the bluffs contain poplar up to nine inches in diameter, while in the southwest quarter the timber is almost all scrub. The lakes shown on the plan in this part of the township are exaggerated. The eastern half of the township is somewhat higher and drier land, and is also covered with poplar and willow; the northeast quarter is more thickly timbered than the southeast. A considerable portion of this half of the township has had the first growth of timber destroyed by fire, and the scrub poplar and willow that grew up in its place has also been partly killed by fire. The soil is chiefly black loam on a clay subsoil. The settlers in this township devote their attention to stock-raising and dairying. I saw nothing being done in the way of grain growing. Ducks were plentiful here while the survey was being made, and some moose were seen by members of the party.—*W. Christie, D.L.S., 1906.*

The eastern half of the township is generally low and wet, with extensive
21. shallow marshes. The western half is higher and timbered with poplar, spruce and tamarack, a good deal of which, however, has been burnt. The soil is of second-class quality.—*C. P. Brown, D.L.S., 1888.*

The southern and eastern portions of this township are mostly covered with marshes, some of which are of considerable depth and full of reeds, while others afford excellent hay and pasture lands. The soil on the higher portions is a black loam from four to ten inches deep with a subsoil of clay and stone and, in a few places, sand. In the northern part of the township there is a limited quantity of poplar and spruce that would be suitable for building purposes. This district is best adapted to stock-raising, as there is abundance of hay and pasturage and water is plentiful and good.—*I. Traynor, D.L.S., 1888.*

This township is almost entirely covered with poplar and spruce forest.
22. There are a number of scattered shallow marshes. The soil is of second-class quality.—*C. P. Brown, D.L.S., 1888.*

The colonization road running from Teulon to Fisher river, laid out under
23. the supervision of the Swamp Lands Commissioners, passes through section 36 of this township, and affords the only means of reaching it from the railroad. The soil is clay, with an alluvial deposit of from six to ten inches of either black or clay loam and will when cleared and drained make excellent farming land. The surface is undulating, and covered with a growth of poplar, balsam of Gilead and spruce, some of which is of fair size. A large part of the township is occupied by two large sloughs or lakes, which are impassable in summer. The poplar and spruce on most of the land would be suitable for building and lumber, but for the latter purpose should be reserved for settlers, as timber is scarce as a rule in this district. Large quantities of hay can be cut in and around all the sloughs and ponds. On the high lands where there is any open country the grass is short. Water in summer is only too plentiful as the sloughs are all fresh; but in winter wells are the only way to be sure of a supply, the creeks and ponds generally freezing solid. The land is too flat

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

to afford any head for water-power. The climate is the usual, but no frosts were observed the preceding summer. There is any quantity of wood for fuel, but no coal. Limestone in place was observed in sections 12 and 14. No minerals were discovered. Moose and caribou are abundant, and also small game, such as prairie-chickens, partridges, and rabbits.—*H. B. Proudfoot, D.L.S., 1902.*

This township is situated in a northwesterly direction about forty-five miles distant from Hnaua post office, on the west shore of lake Winnipeg. It is perhaps most easily approached by means of the Icelandic River road, by way of Framnes and Vidir, the latter place being the nearest post office. The general character of the soil is that of a sandy clay subsoil and appears to be well suited for general farming purposes. The surface is almost level, with a slight fall toward the northeast. This township is much better timbered than most others in this vicinity, as the bush fires had evidently been intercepted by Fisher river. Immediately west of the river, and approximately parallel to it, there is a very considerable amount of fine spruce timber, many of the trees varying from ten to twenty-four inches in diameter. This timber may be said to occur chiefly in sections 26, 35 and 34, although scattered bluffs of considerable size were also observed in sections 21, 28 and 29 and more or less in small quantities throughout the other portions of the township. This township contains a fair amount of marsh hay scattered throughout the various sections, the chief localities noted being in sections 15, 16, 19, 21, 22, 24, 25, 29 and 30, although several small hay sloughs occur in various other sections. In addition to the surface water found in the numerous hay marshes above referred to, the west branch of Fisher river flows in a northeasterly direction through sections 15, 23, 24, 25, 36 and 35, apparently having its source in an extensive marsh in section 15. Fisher river is a fine fresh-water stream thirty feet in width, three feet deep and has a current of two miles an hour. No water-power occurs in this township. Judging from the growth of vegetation noted in this locality, I would say that the climate is very favourable for the pursuit of general farming. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly high, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold, forty degrees below zero being about the lowest temperature recorded during the past winter. This township is more abundantly supplied with fuel, in the shape of growing timber, than most others in the vicinity, since it has not been so completely swept by fire as most others of the surrounding localities. In addition to the spruce already referred to under the head of timber, a large quantity of poplar and birch is also found growing throughout the various sections of the township, sufficient to provide an abundant supply of fuel for many years to come. No stone-quarries have been opened in the township, but as the formation is limestone, although much weathered and broken on the surface, it is quite possible that if opened up to any considerable depth, a serviceable quality of building stone might be obtained. Other than the limestone, no minerals of economic value are known to occur in this township. Small game, such as prairie-chickens and ruffed grouse, were occasionally met with in this locality, but the only species of game found of any consequence is the moose, which is comparatively common throughout the district.—*J. W. Tyrrell, D.L.S., 1908.*

25. This township can be most easily reached by a trail from Teulon, which enters the township in section 1 and ends in section 32. The soil is a black or sandy loam with a clay subsoil, except on the ridges which are usually gravelly or stony. There is some good farming land. The land is gently rolling and covered with

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

heavy timber except in the southeast part which is covered with scrub. The west half of the township is covered with heavy bush. The ridges are covered with jackpine, spruce and poplar which run from about four inches to sixteen or eighteen inches in diameter, while the lower ground is covered with spruce or tamarack of about the same size. The northeast portion is covered with poplar of about four inches to twelve inches, and some scattered spruce and jackpine. Some good hay could be cut around the slough in section 15 and 16, but most of the sloughs do not produce good hay. There is an abundance of good water in all the sloughs. Fisher river which crosses the southeast part of the township is a rather sluggish stream, about one chain wide, which narrows down to about sixteen feet where there are rapids. It is not a good stream for water-power as at the time of the survey (November) there was very little water in it, although there were several places where there is considerable fall and some power could be developed by damming the stream. There is plenty of dry timber everywhere for fuel, but there are no stone-quarries nor minerals of economic value. Moose, elks, deer and bears are plentiful. There are a few partridges and prairie-chickens and some foxes and coyotes. Fish are found in Fisher river.—*C. M. Teasdale, D.L.S., 1908.*

The railway point most convenient to this township at present is Gimli, on
26. the Winnipeg Beach branch of the Canadian Pacific railway. From there the Lake Winnipeg shore road is followed north as far as Hnausa, thence westerly along the Icelandic River road to Vidir post office, from which point the surveyors' road is used. The road as far as Vidir is, under normal conditions, good with the exception of two miles of swamp immediately south of Vidir, which is very soft in a wet season. The surveyors' road, in a dry year such as the present, is good throughout, but in wet seasons there would be a number of soft places on it. The soil may be described as suitable for general farming, the surface soil being a black loam about six inches in depth on a clay subsoil. The surface of the country is entirely wooded and of a gently rolling character with numerous stretches of low swampy land. While the country may be described as generally wooded, much of it is covered with small swamp spruce and tamarack, varying from two to ten inches in diameter and suitable only for cordwood and fence posts. Good timber in the shape of white spruce, tamarack and white poplar covers the entire northern part and is also found in sections 7, 8, 11, 12, 13 and 15 in the southern half. This township is fairly well supplied with hay of good quality, most notably in sections 4, 5, 7, 8, 11, 12, 13, 14, 20, 22, 23, 25, 29, 30 and 34, and on the edges of the numerous swamps. The easterly portion of this township is well watered by three small lakes, the water in which is of good quality. In addition, water may be obtained at some point in almost every section in the township by digging to no great depth. No water-powers occur. The climate may be described as one suitable for general farming, no summer frosts being observed. Fuel in the shape of cordwood is very plentiful throughout, but no indications of coal or lignite veins were observed. No stone suitable for quarrying was observed. No minerals of economic value are known to exist. Big game is very plentiful, many fine moose being observed and elks are known to frequent this locality. Partridges and prairie-chickens are also very plentiful.—*J. W. Tyrrell, D.L.S., 1909.*

The railway point most convenient to this township at present is Gimli, on
27. the Winnipeg Beach branch of the Canadian Pacific railway. From this point the Lake Winnipeg shore road is followed north as far as Hnausa; thence the route is westerly along the Icelandic River road as far as Vidir post office, from which point the surveyors' road is used. The road as far as Vidir is, under normal conditions, good, with the exception of two miles of swamp immediately south of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

Vidir, which is very soft in a wet season. The surveyors' road in a dry year, such as the present, is good throughout, but in wet seasons there would be a number of soft places on it. The soil may be described as suitable for general farming, the surface soil being a black loam six inches in depth on a white clay subsoil, which is rather stony in some localities. The surface of the country is entirely wooded with the exception of a large open swamp or muskeg which covers a great part of sections 34 and 35 and extends a long distance north. While the country may be described as entirely wooded, much of it is covered with small spruce and tamarack varying from two to ten inches in diameter, and suitable only for cordwood and fence posts. Good timber, consisting of white spruce, jackpine, tamarack, birch and white poplar may be found in sections 13, 14, 15, 17, 18, 19, 21, 30 and 36, the average diameter being about eighteen inches. Scattered through these sections, however, is considerable exceptionally fine white spruce running up to thirty inches. Hay in considerable quantities grows in sections 13, 14, 15, 16, 19 and 30, and is of very good quality, but in most cases it can be mown only with a scythe, the ground being too wet for the use of a mower. Good fresh water may be obtained at no great depth in any section in the township, and Mantagao river supplies sections 31 and 32 with a permanent and sufficient supply. The land, other than the swampy part, is not liable to flooding. No water-powers occur in this township. The climate may be described as suitable for general farming, no summer frosts being observed. No stone-quarries nor minerals of economic value are known to occur in this township. Big game is very plentiful, many fine moose being observed, and elks are also known to frequent the township. Partridges and prairie-chickens are also plentiful.—*J. W. Tyrrell, D.L.S., 1909.*

The general character of this township is similar to that of range 2, consisting of flat ridges timbered with poplar, spruce and tamarack up to eight inches in diameter, separated by tamarack swamps, marshes and hay lands. A small lake occurs in sections 36 and 35. Mantagao river, a stream about thirty feet wide, crosses the line in section 34, flowing almost due north. On either side of this stream is a strip of marsh and hay meadow from a quarter to half a mile in width and close to the river banks there are tall reeds. The soil is chiefly black loam on clay subsoil.—*W. Christie, D.L.S., 1907.*

Access to this township was obtained with considerable difficulty by the construction of a wagon road from section 31, township 26, range 5, where a portable sawmill is located, and from which a winter road had previously been constructed to Moosehorn. The road is very crooked, it being necessary at times to go several miles out of a direct course in order to get around some large muskeg or swamp, and as the country is thickly timbered, it required a good deal of road cutting. Owing to the stumps and parts of swamps crossed by the road, it is a very rough and hard road for summer teaming and requires three or four days to make the trip from Moosehorn with a load. I could only continue my road three-quarters of a mile east of the west boundary of this township as a large muskeg, covering over one-half the area of the whole township, blocked the way for further progress with horses. I was obliged to complete the survey, as much as possible, from the camp located on the wagon road, and, as we could not by any means locate a camp within reach of the eastern part of the township, I was compelled to leave that part until winter, when we completed the township, locating a camp by back-packing from township 29 range 4. The whole central part of this township is one large muskeg and swamp covering about one-half the area and extending into the townships to the north and south. This portion is totally unfit for settlement in its present condition, although if it were possible to drain off the water by constructing a drainage system along the Mantagao

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

river, it would probably become good hay land. The central part of this muskeg is practically bare of timber but is covered in most places with tall reeds and alder brush. The remainder of the muskeg is timbered with small tamarack. The higher land is well timbered with spruce, poplar, tamarack and some birch and jackpine averaging six or seven inches in diameter, while the swamps are covered with tamarack and occasionally spruce. The soil on the higher ridges is good, being black muck or clay loam with a clay subsoil, and would be suitable for stock-raising or mixed farming. In the southeastern part of this township, east of the muskeg, and along the Mantagao river in sections 4 and 5, there is some first-class land, although, like the rest of the township, it is quite heavily timbered. There is some fairly good hay land along the Mantagao river in section 4, although it is not very large in area. It is possible that in a dry season there might be some good hay lands along the edges of the big muskeg. Few streams were found and they were small, being merely water channels from one swamp or muskeg to another. The Mantagao river flows through this township. It is about fifty-five feet wide, four feet deep and has very little current in most places. It is blocked in several places by large log jams. In section 3 and again in section 15 it dwindles in size, eventually spreading out over the muskeg so that its course can not be followed exactly. I found three lakes on the east boundaries of sections 14, 23, 26 and 35. An abundance of surface water also exists in the swamps and muskegs. The water is fresh. There are no water-powers. The climate is like that of northern Manitoba, subject to extremes of heat and cold. No summer frosts were observed. No coal is known to exist, but wood for fuel is readily obtained anywhere in the township. No stone-quarries nor minerals of economic value were found. Moose and elks are quite plentiful, and black bears are occasionally seen. Partridges, grouse and rabbits are to be found, but not very plentifully.—*E. P. Bowman, D.L.S., 1912.*

This township can be reached from lake Winnipeg by way of Sturgeon bay
29. and the Mantagao river, which is navigable for small boats or rafts. Though a roundabout route, this would be the best way to take any quantity of supplies into the township during the summer season. On account of the generally marshy and swampy nature of a large part of this region it is difficult to locate a road at all suitable for teaming after the frost is out of the ground. It is claimed by the local Indians that there is a ridge which runs northwesterly from a point a little west of the forks of the Fisher river to the Mantagao river in this township. The trail to this township used during the survey leaves the Fisher river at Henry Hope's lot on the Peguis Indian reserve and runs northwesterly through townships 27 and 28 into township 29, range 12, and thence westerly to the Mantagao river. This trail, however, is very rough and traverses a lot of low ground, swamp and marsh, and in places is almost impassable for even an empty wagon. The Peguis Indian reserve is reached from Arborg, the terminus of the Teulon-Arborg branch of the Canadian Pacific railway by a road which runs northwesterly by way of Vidir and Hodgson to the the reserve; from here it follows the Fisher river down to Fisher bay. This road is cleared, well travelled, has some necessary bridges and is graded in places as far as Vidir, but it is so soft and boggy in many place that except after a long period of dry weather or in the winter time it is of little value for freighting. Within the township the survey trail followed the north boundary of section 12 to the southeast corner of section 14 and then ran north skirting the muskeg to the northwest corner of section 23. A portage was made across the muskeg at this point, and thence the trail ran west to the Mantagao river. By following the muskeg still farther around to the north it could be crossed a little to the north of the north

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

boundary of the township, near the Mantagao river, and the river is easily forded at the same place. From here a trail could be made through sections 33, 32 and 31 westward and southward through the westerly tier of sections of the township, a little to the west of their eastern boundary. The soil in this township consists of humus or muck on a clay subsoil. Boulders are sometimes associated with the clay and on the higher ridges almost invariably so and sometimes gravel. Most of the ridges are stony and some of them have rock outcrops. There is a good deal of loose limestone rock along the shore and banks of the Mantagao river. The depth of humus varies from four to ten inches, the depth of the muck to as many feet but it is often mixed with clay, is sometimes slimy and very rarely alkaline. The best soil is found in the quarter sections bordering the river where they are not too swampy, and the poorest soil in the northeast part of the township. The soil itself is well suited for any and all agricultural purposes but under present conditions other factors, such as over-abundance of water, prevalence of summer frosts and scarcity of pasture, would prevent profitable farming in many branches. Hay and fodder grains and plants could easily be grown and, on account of the richness and moisture of the soil, potatoes and root crops should grow well. The surface of the township is generally rolling. There is a lot of level, almost flat lands in the muskegs and marshes with a few rocky ridges and some small hills. The drainage is to the north. The muskegs run north and south, and the larger ones are continuous throughout the township. They are not as a rule constant in character, varying greatly in width, depth of surface water, softness of crust, depth of muck and amount of timber and scrub, and changing from muskeg to marsh, bog or swamp. About forty per cent of the land is low, wet and more or less swampy. The surface of the township is covered throughout its extent with timber and scrub except where there is open bog or marsh. No quarter-section is exclusively scrubby but the amount of scrub increases with the openness of the timber. The size of timber is small. Taking the township as a whole ten inches is about the average size. Spruce is found up to two feet in diameter but is very scattered. The best spruce is found in sections 14, 23, 22, 7, 18, 28. It is the most abundant timber in the township. In the west half and especially in the northwest quarter of the township there is a lot of small spruce covering considerable areas and growing so thickly as to smother any other growth except a little thin moss. Next to spruce, tamarack is the most abundant timber. It is found up to eighteen inches in diameter and averages about eight inches. It is found throughout the township but more so in the muskegs and swamps. A lot of the tamarack in the muskegs is very scrubby, gnarled and twisted. Poplar up to twenty inches in diameter and of an average size of ten inches is found throughout the township but is not abundant. The best poplar is found in the south and east. Fire has destroyed a considerable quantity of fine poplar along the Mantagao river. A lot of black poplar or balsam poplar grows along this river but it is generally small in size and sodden in texture. Birch is found up to sixteen inches and of an average diameter of about six inches; there is not very much of it, and a large percentage is scrubby. The best birch is found in sections 11, 12, 13 and 14. There is a small amount of balsam scattered throughout the township, but it is small, ranging up to ten inches with an average diameter of three inches. It is most abundant in the south and east of the township. Jackpine grows on the higher ridges and hills. It is scrubby and small, having an average size of about four inches. Some elm grows along the Mantagao river in the northern part of the township. It has an average diameter of about three inches. An occasional small ash is seen. Of scrub there is a lot of dense willow along the Mantagao river, and alder and willow are found throughout the township. Swamp birch is abundant in the muskegs and swamps. The sheep-berry

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

tree and cranberry tree (*Viburnum lentago* and *Viburnum opulus*), also the hazel (*Corylus*), are very common. Two varieties of wild plum are found along the Mantagao river. Cherry, saskatoon trees, scrub oak and ground hemlock are scattered throughout the township. Of small shrubs, the rose, juniper, black and red currant, gooseberry, raspberry and hawthorn, are common. There is little hay in the township. A considerable quantity could be cut along the shore of the Mantagao river, and there are a few hay ponds—dry in dry weather—scattered throughout the township. There are also some hay marshes, and a little hay grows around the edge of some muskegs, but in these cases the ground is too soft and the water too deep to permit of the cutting or curing of the grass. What there is, is mixed with scrub and is of poor quality, being coarse, watery and lacking in sweetness. The hay along the river is much better than the marsh hay. There is a scarcity of pasture in the township as the timber is usually too dense for grass or the wild pea-vine and vetch, and in such places where there is open timber, the ground is generally either rocky or boggy. Much of the marsh land could easily be turned into good hay land. All the water in the township is fresh, and the supply is both sufficient and permanent. There are no lakes and only one river, the Mantagao. The source of this river is North Birch lake in township 27, range 4. It flows north through the centre of this township. Its width varies from thirty to sixty feet and its depth from three to five feet. The rate of flow is about five miles an hour. The bed of the river is firm in the centre of the stream and soft and boggy toward the edge. The water is generally rather turbid and is cold, fresh and fairly hard. The water is flush with the banks and during high water spreads over them. The secondary banks are from two to four feet above the water level and are situated at a distance from the river varying from ten links to ten chains or vanish altogether when the river flows through a muskeg or marsh. Its course is tortuous and there are many back channels and side pools. A few small creeks drain into the river or from one muskeg to another but none of them are of any importance. They are about three feet wide, and one foot deep or less, and the current is sluggish. There is, however, a great deal of water in the swamps, muskegs, marshes and bogs, either as surface water or covered by moss or a thin turf. The land is liable to be flooded, although after heavy rains about fifty per cent of it would have a depth of surface water varying from three inches to three feet. About forty per cent of the township is permanently water soaked or water covered. On account of the drainage afforded by the Mantagao river, this township is not so wet as ranges 1 and 2. The whole township could easily be drained into the river. There are no falls on the Mantagao river, but near the north boundary of section 33 there are some easy rapids. At this point by the construction of a dam about twenty or thirty horse-power could be developed. The climate is mild and wet. There is a lot of dull, wet weather. Showers come up quickly and the sky is generally cloudy. There are very few fine, clear days. Rains are frequent but they are not generally heavy. Only one rain-storm was accompanied by thunder and lightning and there was only one bad wind-storm. On the night of September 14 after a heavy rain there was a little snow followed by hard frost, ice remaining on the stagnant water throughout the greater part of the following day. Traces of the frost experienced in range 2 on August 2 were seen in the frosted grasses and berries. The fuel most readily available is wood, and it can be procured anywhere in the township. No coal nor lignite veins were seen. There are no stone-quarries. Along the river there is considerable loose limestone, and in section 6 near the base line there are some limestone ridges. It appears to be a fairly pure and good burning stone. No minerals of economic value were found in the township. There is a variety of game. Moose are abundant and there are some elks, small deer and bears. Of fur-bearing

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 3.—*Continued.*

animals, there are small wolves or coyotes, foxes, otters, minks, skunks, and muskrats. None of these are common, however, except the muskrats. There are also some martens and an occasional wolverine. Rabbits are very plentiful. Pike are found in the river. Two varieties of grouse are common, the birch or poplar partridge (*Bonasa*) and the spruce partridge (*Canace*). Ducks are sometimes seen along the river and it is likely that some of them nest in the township. Squirrels are plentiful. Other birds, besides the game birds mentioned, are rare. The most common are the shrike or butcher bird, the chickadee, the great horned owl, the ground hawk, the loon, the bittern, the spotted woodpecker and the giant woodpecker.—*R. Neelands, D.L.S., 1912.*

RANGE 4.

(*South outline.*)—The country along this line is nearly all covered with
17. poplar and oak. There is some hay and occasional glades of prairie, and the soil is of second-class quality. The remainder of the township is nearly all undulating prairie with a belt of timber near the eastern boundary. There are a number of small hay marshes throughout.—*M. Hart, D.L.S., 1871.*

(*Subdivision.*)—The southerly as well as the easterly portion is wooded. The remainder of the township is prairie, broken by swamps and hay grounds. The soil is a rich loam, but stony.—*W. Wagner, D.L.S., 1872.*

(*East outline.*)—This line crosses alternately prairie and poplar bush. The
18. soil is of first-class quality.—*M. J. Charbonneau, D.L.S., 1872.*

(*Subdivision.*)—The township is well adapted to tillage and stock-raising. There is an ample supply of timber for fuel, building and fencing.—*W. Wagner, D.L.S., 1883.*

Oak Point, a station on the Canadian Northern railway, is situated in this township. As this township is well settled, we travelled over it by fair wagon roads during the survey. All homesteads are taken by Icelanders, an intelligent and industrious people. The soil is of good quality being generally of black loam with a stone and gravel subsoil. Although this township has been settled for twenty years the owners of lands do not seem to appreciate the quality of the soil for farming. In its present condition, the land is better suited for cattle raising and dairying. The surface is level and is covered with scrub, patches of poplar, a few oak, sloughs, hay marshes and prairie, where they have always plenty of good hay, even in wet seasons. All valuable timber has been cut for building and fencing. Poplar, the average of which is of poor quality, is the only fuel. Good water is plentiful and can be obtained easily by digging wells without great expense. Only prairie-chickens are found in this township, but ducks are plentiful around lake Manitoba. No minerals nor water-powers were found.—*C. E. Bourgault, D.L.S., 1907.*

(*East outline.*)—This line crosses prairie with many bluffs of poplar and
19. brush. There are a number of scattered hay marshes. The soil is of first- and second-class quality.—*M. J. Charbonneau, D.L.S., 1883.*

(*Subdivision.*)—This township has, particularly in the western half, splendid soil and enough wood to give fuel and fencing to the settler, and is therefore well adapted to mixed farming.—*W. Wagner, D.L.S., 1883.*

This township can be best reached by wagon road from Oak Point. The land is mostly stony and the soil is not of much depth with, generally, a gravel subsoil.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

Grain, however, can be grown in many places, but at present the settlers are chiefly engaged in cattle-raising and dairy farming. I think this township would be suitable for mixed farming. The land, in the part surveyed, is nearly level and is composed of prairie, scrub land and hay meadows. The prairie land appears to cover about the southwest half of the township and the scrub the northeast half, while the hay meadows are found in all parts. There is no timber of any commercial value. Hay is, generally, fairly abundant and appears to be about evenly distributed. Water when found was fairly good. The settlers, however, now depend mainly on wells for their supply. There are no streams. The climate is suitable for any kind of farming now carried on in Manitoba. Fuel will soon be scarce in this locality. No stone-quarries nor minerals of value were noticed. Game is becoming scarce; a few ducks, only, were seen.—*E. Bray, D.L.S., 1905.*

This township is of the same general character as township 19, range 3, but has, on the whole, less bush and consequently a correspondingly greater area of grazing and hay land. Much of the north half of the township has evidently been covered with timber, which has been destroyed by fire, and a second growth of small poplar and willow has sprung up in its place. The north half of the township has more prairie. The settlers in this township, as in township 19, range 3, devote themselves entirely to stock-raising and dairying, no attempt being made to cultivate the land beyond the growing of a few potatoes and other vegetables for their own use. A ditch has been dug across part of the township draining into lake Manitoba. It starts in section 16 and leaves the township at the north boundary of section 7 and drains a considerable area of marshy land, thus greatly increasing the area of grazing and hay land in its vicinity. The soil is chiefly black loam to a depth of from three to ten inches on a subsoil of clay. Good water may be readily obtained in any part of the township by digging or drilling wells.—*W. Christie, D.L.S., 1906.*

(*North and east outlines.*)—The country along the east outline is prairie with small poplar and bluffs of brush. There are many small hay marshes throughout and a lake in sections 24, 25, 35 and 36. The north outline crosses rolling land, bluffs of poplar and brush, hay marshes and a number of small lakes. The soil throughout is of second- and third-class quality.—*M. J. Charbonneau, D.L.S., 1883.*

(*Subdivision.*)—This township is mostly all timbered with poplar. The soil is light on the numerous ridges of gravel; most of it is of third-class quality. There are four lakes near the centre of the township and also a number in the northeasterly part.—*W. Wagner, D.L.S., 1883.*

This township consists of ridges covered with young poplar and large hay sloughs which will become of great value as soon as the lands have been drained. The soil throughout is second-class. There are a few settlers in this township. No timber of any value is to be found.—*A. F. Martin, D.L.S., 1902.*

This township can be reached by roads from Oak Point station on the Canadian Northern railway. The soil is of good quality but is generally shallow and stony with a gravel subsoil. In its present condition the land is better suited for cattle-raising and dairy farms than for any other purpose. The surface is generally nearly level and is made up of scrub land, hay land, marshes, some prairie and a few scattered bluffs of poplar, mostly of poor quality. Hay land is found in almost every quarter-section in this township, growing large quantities of hay of excellent quality. Water is plentiful and the supply generally permanent. The settlers, however, generally have wells in which the quality of the water is much better. There are no streams. The climate is suitable for any kind of farming followed in Manitoba. Wood is the only

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

fuel and in quantity is only sufficient for the present wants of the settlers. No stone-quarries nor valuable minerals were seen. Ducks in season were plentiful. Other game is becoming scarce.—*E. Bray, D.L.S., 1905.*

This township is also covered, chiefly, with small poplar and willow and numerous marshes, lakes and small patches of prairie. Much of the township has been covered with heavier timber which has been destroyed by fire, the present growth of small poplar and willow growing up in its place. The settlers are engaged in stock-raising and dairying. Plenty of hay is obtained almost all over the township. The lakes shown on the plan in the northeastern part of the township are greatly exaggerated. A considerable part of what is shown as water on the plan is in reality dry land covered with woods, while more of it is excellent hay land. The soil is chiefly black loam on a clay subsoil. It is very stony. Ducks were plentiful here while the survey was being made.—*W. Christie, D.L.S., 1906.*

(*South outline.*)—This line crosses rolling land, bluffs of poplar, brush and
21. hay marshes, and a number of small lakes. The soil is of second- and third-class quality.—*M. J. Charbonneau, D.L.S., 1883.*

(*Subdivision.*)—The greater portion of the land in this township is broken by numerous marshes, some of which yield an abundance of hay and afford excellent pasturage. This portion is well adapted for stock-raising. On the high lands there is from four to ten inches of alluvial soil with a subsoil of mixed clay and stone of the nature of hard-pan. The land is stony in places and generally of third-class quality.—*I. Traynor, D.L.S., 1889.*

We proceeded southerly from the Fisher river over a good wagon road, passing through this township to Oak Point. All sections in the township are accessible by good roads, although the road allowances bounding many of the sections are not as yet opened up. The Winnipeg-Gypsumville branch of the Canadian Northern railway borders the west boundary of this township. There are several good stores at Eriksdale in township 22, range 5. The soil consists of from four to ten inches of black loam with a clay or gravelly clay subsoil, capable of raising good crops of almost any class of wheat or grain. The surface is covered with red willow and poplar scrub with scattered clumps of poplar from three to six inches in diameter. The sections bordering the east boundary are more heavily wooded than the remainder of the township, being thick poplar from six to twelve inches in diameter, suitable for building and cord-wood. There is a large number of both large and small hay sloughs, also many lakes and ponds, making this land most suitable for mixed farming. Probably this township is capable of yielding 2,000 tons of wild hay annually. The water in all the small lakes is good, but no running creeks were seen. Pure water, however, is obtained almost anywhere by digging ten or twelve feet. There are no water-powers. No trouble has been experienced with frosts which were not general over the province. During the past summer the small crops raised by the settlers were very successful and harvested early. The abundance of small poplar makes excellent fuel and during the winter months poplar cordwood is marketed in Winnipeg from this and the adjoining districts. There is no geological indication of coal in the township. Apart from the glacial boulders which cover the ridges there is no stone nor are there any mineral-bearing rocks. This loose rock on the surface will make excellent material for foundations and stone houses. Partridges, prairie-chickens, wild ducks and rabbits are plentiful, but are being killed off fairly rapidly by the settlers. Directly north of this township, there are elks, moose and jumping deer.—*A. G. Stuart, D.L.S., 1912.*

(*Ranges 4 and 5.*)—These townships are now settled. The inhabitants are nearly all half-breeds, and slow progress is being made in clearing off the scrub.—*G. A. Bennett, D.L.S., 1912.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

This township, generally, is not a desirable one for settlement, the land being
22. low, flat and wet with many marshes and no natural drainage to discharge the surface water. The timber in the northeasterly part is poplar of a fair size; in the southeasterly and westerly parts there is a young growth of poplar intermixed with willow and brush. The soil is generally a sandy loam with a stony surface in places.—*M. Deane, D.L.S., 1888.*

The general aspect of this township is swampy and at the time of survey (September) nearly all covered with water. In wet seasons settlers cannot depend on the swamps to obtain a supply of hay to feed their cattle during the winter. There are some high ridges where the soil is composed of a few inches of black loam with sand and gravel subsoil, but they are covered with poplar and windfall. Moose and deer are quite numerous.—*C. E. Bourgault, D.L.S., 1907.*

This township was reached from township 23, range 6, by my trail, which I
23. cut along the south boundary of township 23, range 5. After entering the township in section 6, it runs northeasterly across sections 6, 7, 8, 17 and 16, and thence following the centre meridian, as closely as the nature of the ground permits, to the northeast corner of section 33. This trail is very soft in many places. The soil is black loam to a depth of from four to ten inches. The subsoil varies from clay, clay and boulders to gravel. The best of it should grow all the cereals, but the land generally is best adapted to mixed farming. The surface is all bush, broken, however, by numerous marshes and muskegs. The marshes occupy about twenty per cent of the surface. The timber is chiefly black and white poplar and spruce. The spruce occurs (along with the poplar) almost entirely in the eastern half of the township. No good hay occurs as the marshes contain a coarse, sour muskeg grass, but on account of the large amount of water in the marshes even this could not be harvested. Fresh water is everywhere abundant. No streams exist. At the time of the survey (November) all the marshes and muskegs were full of water. The climate is moderate. During the time of the survey winter set in with a fall of fifteen inches of snow, which arrived before the frost, leaving the ground and marshes unfrozen. After a heavy frost, about November 18, the weather remained mild until the completion of the survey. Fuel is everywhere abundant. There are no stone-quarries and no minerals. The game consists of moose and elks.—*J. L. R. Parsons, D.L.S., 1906.*

This township was reached from township 23, range 4, by my trail along the
24. east boundaries of sections 4 and 9 to Sleeve lake, thence on the ice. The soil is chiefly black loam from four to six inches in depth on a clay subsoil. This should grow cereals, and is best adapted to mixed farming. The surface is bush, except where broken by Sleeve lake and the numerous large marshes surrounding and draining into Sleeve lake. Sleeve lake and the surrounding marsh covers the following sections: north half 8, 9, 10, 11, 15, 16, 17, 18, east half 19, 20, 21, south half 22, south half 28, south quarter 29, 30, 31 and 32. To the south and west of Sleeve lake the timber is poplar from four to fourteen inches in diameter, about fifty per cent of which has been fire-killed or has died of dry rot. To the north and east of Sleeve lake the timber is spruce and poplar in about equal quantities, running from four to twenty inches in diameter. There is a little tamarack in this part. No good hay was seen as the marshes contain a coarse, sour muskeg grass and these marshes were so full of water at the time of the survey that even this grass could not be cut. Fresh water is everywhere abundant. The weather during the survey (November and December) was cold, often considerably below zero in the morning. Despite this the ground and marshes remained unfrozen, being protected by the deep snow which fell about the middle of November. Fuel is everywhere abundant. No stone-quarries

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

were found nor any minerals. The game consists of moose and elks, and fish are plentiful in Sleeve lake, consisting of jackfish and a few English perch. Several half-breeds are now engaged in fishing there, and their catch include jackfish up to ten pounds. These are teamed to Oak Point, a distance of forty miles, where they sell for two and one-half cents per pound.—*J. L. R. Parsons, D.L.S., 1906.*

This township can be most easily reached by a trail from Teulon which enters
25. township 25, range 3. I opened up a trail easterly across townships 25, ranges 4 and 3, which joins this trail in section 14. The soil consists of about six inches of loam but has a gravelly or stony subsoil in most parts and would be very hard land to clear on account of the timber. The surface is mostly level but is gently rolling in some parts. The whole township is covered with heavy bush consisting of spruce, tamarack, jackpine and poplar, most of which would run between eight and sixteen inches, but in some parts it is larger, and is best adapted to making railway ties. Some hay could be cut around Little Birch and Sleeve lakes. The sloughs in the remainder of the township do not produce hay but they supply permanent fresh water. There are no streams and so no available water-power. Frosts were quite common after August 18. Dry wood is scarce and there are no coal nor lignite veins in the township. There are no stone-quarries nor minerals of economic value. Moose, elks and bears are plentiful. There are a few partridges, and ducks are plentiful. Good fish are found in both Little Birch and Sleeve lakes.—*C. M. Teasdale, D.L.S., 1908.*

The railway point most convenient to this township, at present, is Gimli on
26. the Winnipeg Beach branch of the Canadian Pacific railway. From there the Lake Winnipeg shore road is followed north as far as Hnausa, thence the route is westerly along the Icelandic River road to Vidir, from which point the surveyors' road is used. The road as far as Vidir is good under normal conditions, with the exception of two miles of swamp immediately south of Vidir, which is very soft in a wet year. The surveyors' road in a dry year, such as the present has been, is good throughout, but in wet seasons there would be a number of soft places on it. The soil may be described as suitable for general farming, the surface soil being a black loam about six inches in depth on a white clay subsoil. There are, however, quite a few sections in which the limestone bed rock is very close to the surface, which spoils these sections for farming purposes, notably sections 7, 8, 17 and 18. It should also be mentioned that in many localities the clay subsoil is stony. The surface of the country is entirely wooded, but much of the timber in the swamp portions of the township is suitable only for cordwood and fence posts. Timber suitable for lumbering purposes is pretty generally distributed over the township, but in no place occurs in very large clumps. The general average diameter of such timber is from ten to fifteen inches and occasionally trees run from twenty to thirty inches. The timber consists of white poplar, spruce, birch, and considerable jackpine of a size suitable for railroad ties. Considerable hay of good quality is found throughout the township, notably in sections 5, 7, 8, 12, 14, 15, 16, 17, 33 and 34. Good fresh water may be obtained at no great depth in almost every section in the township, and a small lake of good fresh water occurs in section 1. No water-powers occur. The climate is suitable for general farming purposes, no summer frosts being observed. Wood fuel is very plentiful throughout the township, but no coal or lignite veins were observed. No stone suitable for building was observed, but the limestone bed rock which comes to within a few inches of the surface in the southwesterly portion of the township would, if quarried, provide a good road metal and stone for concrete. No minerals of economic value are known to exist. Big game is very plentiful, many fine moose being observed, and elks are known to frequent the township. Partridges, ruffed grouse and prairie-chickens are also plentiful.—*J. W. Tyrrell, D.L.S., 1909.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

The railway point most convenient to this township at present is Gimli on the Winnipeg Beach branch of the Canadian Pacific railway. From there **27.** the Lake Winnipeg shore road is followed north as far as Hnausa; thence the route is westerly along the Icelandic River road to Vidir from which point the surveyors' road is used. The road as far as Vidir is, under normal conditions, good, with the exception of two miles of swamp immediately south of Vidir, which is very soft in a wet year. The surveyors' road in a dry year, such as the present has been, is good throughout, but in wet seasons there would be a number of soft places on it. The soil may be described as suitable for general farming purposes, the surface soil being a black loam about six inches in depth on a white clay subsoil, which is, however, in most cases very stony. The surface of the country is entirely wooded and the most of the land is high and dry, the most notable exceptions being sections 18, 13, 24, 25, 21 and 9, which are low and swampy. While the country is entirely wooded, much of the timber is suitable only for cordwood and fence posts. Timber suitable for lumbering purposes is distributed over the entire surface of the township, but is rather scattered. It consists of white poplar, white and swamp spruce, tamarack, jackpine and a few birch. The township is fairly well supplied with a good quality of hay, especially in sections 14, 17, 18, 19, 23 and 33. The township is provided with an exceptionally good and permanent supply of fresh water by North Birch lake and Mantagao river. Good water can be obtained at no great depth in any section of the township. No water-powers of economic value occur. The climate may be described as suitable for general farming, no summer frosts being observed. Wood for fuel is very plentiful in all localities in the township, but no indications of coal or lignite veins were observed. No stone suitable for quarrying and no minerals of economic value were observed. Big game is very plentiful, many fine moose and elks being observed. Partridges and prairie-chickens are also plentiful.—*J. W. Tyrrell, D.L.S., 1909.*

(*North outline.*)—This township is similar to those in ranges 2 and 3, consisting of low ridges, covered with poplar, spruce and tamarack, alternating with tamarack swamps, muskegs and hay marshes. The proportion of dry **28.** land is somewhat greater, however, and the timber somewhat larger than in range 3; there is some spruce and poplar twelve inches in diameter. A small lake occurs in section 32. The soil is chiefly black loam on clay subsoil but gravel occurs in places.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—The eastern part of the township is heavily timbered with poplar, spruce, tamarack and birch, some of which measures up to eighteen inches in diameter. The character of the surface is rolling and stony where the land is high and dry. The surface soil is black loam to a depth of three or four inches, with boulder clay below. A small tamarack swamp crosses the eastern boundary of section 36 and a small stream about twelve feet wide and two feet deep crosses the eastern boundary of section 25, close to the southeast angle of the section, and flows in an easterly or northeasterly direction. The locality generally is of a somewhat swampy nature, but with improved drainage should become a fair country for mixed farming after the land has been cleared. The western side of this township is decidedly swampy with rolling dry land and poplar ridges intervening. The swamp lands are thinly wooded with small tamarack and the dry ridges chiefly with white poplar and some scattered spruce and tamarack of considerable size, the largest measuring as much as twenty-four inches in diameter. Mantagao river takes its rise in this locality and hence the wet nature of the surface. The top soil on the higher lands is black loam to a depth of about six inches with a heavy dark clay subsoil. A small body of fresh water, which

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Continued.*

has been named Plum lake, covers the northwestern part of section 19 and the southwestern part of section 30. The locality is more suited for stock-raising than for general farming.—*J. W. Tyrrell, D.L.S., 1909.*

Access to this township is obtained by means of a wagon road from Moosehorn, on the Canadian Northern railway. Part of this road had been constructed to a portable sawmill in section 31, township 26, range 5, and from there I was obliged to cut out my own road. The road runs northerly from the sawmill until it enters township 28, range 5, in section 5, and continues through this township, entering township 28, range 4, in section 19. In cutting this road I was obliged to go three miles south to the south boundary in order to get a place to cross a soft muskeg which extends practically from north to south of this township. This road is very bad for summer teaming as it is only possible to haul very light loads, since there are many soft places where a team is likely to get mired, making it necessary to unload. The land is very much broken by lakes, swamps and muskegs so that probably about one-half of the area would be too wet for agriculture at the present time. Many of the muskegs are very large and full of open water-holes and soft places, making it very difficult even for a man to cross. Of the high land a considerable portion is stony, though, generally, all the higher land would be suitable for stock-raising or mixed farming. The soil generally is good, being black loam on a clay subsoil with gravel and sand in some places. The surface is thickly timbered with poplar, spruce, tamarack and some birch and jackpine. The average diameter would be about seven inches. Hazel underbrush is found on the higher ridges and willow and alder underbrush on the low lands. There are no good hay lands. The only hay is found in a few small marshes which are generally very wet, and the hay there is not of much value for feed. Only a few small streams were found, these being about three to four feet wide, one to two feet deep and generally having very little current, although in some places they have a current of two or three miles per hour. There are a number of good lakes in this township and an abundance of surface water exists in the swamps and muskegs. The water is fresh. No streams were found where water-power could be developed. The climate is similar to that of northern Manitoba, being very hot in the summer and very cold in the winter. There was a great deal of cloudy, wet weather during the summer and fall. No summer frosts were noticed. No coal is known to exist in this locality, but wood for fuel may easily be obtained anywhere in the forest. No stone-quarries nor minerals of any kind were found. Moose and elks are plentiful, and jumping deer are seen occasionally. Black bears are quite numerous. Partridges, grouse and rabbits are very plentiful. No fish were found in the lakes.—*E. P. Bowman, D.L.S., 1912.*

This township was reached by a wagon road from Moosehorn, part of which
29. was constructed to a portable sawmill in section 31, township 26, range 5, and used as a winter road. From there we were obliged to cut our own road to this township. The road is very rough and difficult as a summer wagon road, especially during a wet season such as 1912. The country is slightly undulating, the greater part being low, level land, very thickly covered with spruce and tamarack from one to seven inches in diameter. In some places the timber is so small, thick and tangled that one can hardly force his way through it without cutting a path. The higher ridges are timbered with poplar, spruce, jackpine and birch averaging about six inches in diameter. On the whole this township is very thickly timbered. There is no prairie, the only untimbered areas being some of the muskegs. A considerable portion is covered by wet swamps and muskegs but not so great a percentage as in the adjoining township. A large percentage of the land is stony and might be classed as second- or third-class farming land. The soil is generally muck or clay loam

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 4.—*Concluded.*

with a clay or stony clay subsoil and would require considerable clearing to make it ready for agriculture. There is very little good hay land in the township although there are occasional small marshes which might be used for hay. I found three lakes in this township, also a few small streams in all of which the water is fresh. No water-powers could be developed. The climate is similar to that of northern Manitoba in general. No summer frosts were noticed. Wood is plentiful for fuel and can readily be procured anywhere in the township. No stone-quarries nor minerals of economic value were observed. Game is plentiful. Moose and elks are frequently seen, and also a few black bears. Of smaller game, partridges, grouse and rabbits are fairly plentiful.—*E. P. Bowman, D.L.S., 1912.*

RANGE 5.

This is a fractional township east of lake Manitoba. The greater part of it is
18. an extensive marsh with lagoons and lakes. The rest of the township is good dry land, well adapted to settlement. The soil is rich and mellow with few stones. The easterly tiers of sections are wooded with oak and poplar.—*W. Wagner, D.L.S., 1874.*

This township is easily reached by a good trail from Oak Point, a station on the Canadian Northern railway. The soil generally is three to four inches of black loam with a subsoil of clay and stones, and is suitable for cattle-raising and dairying. Bluffs of small timber, consisting of oak, poplar and willow are fairly plentiful, the oak and poplar trees averaging about six inches in diameter. Hay is very plentiful in the marshes and around the edge of the lake. The water in the lake and marshes is plentiful and of good quality, being free from alkali. The climate is good, there being no summer frosts. Fuel is scarce in the township, the settlers having to go long distances for it. There are no water-powers, quarries nor minerals in the township. Game, consisting of wild ducks and prairie-chickens, is very plentiful. There are also many fish in the lake, which is a source of income to the settlers, who catch them in the winter time and carry them to Oak Point where they sell readily.—*W. J. Deans, D.L.S., 1906.*

This township is on the easterly shore of lake Manitoba. There is an
19. extensive marsh on the shore of the lake. The easterly half is splendid soil, and is very well wooded with oak and poplar, with extensive prairies. There are several small lakes, affording a good supply of water.—*W. Wagner, D.L.S., 1874.*

The country in this township is flat and covered with numerous alkaline sloughs. It is settled chiefly with Icelanders who devote most of their efforts to stock-raising.—*A. F. Martin, D.L.S., 1902.*

This township is easily reached by existing roads from Oak Point. The soil is good, though not deep, and has generally a gravel subsoil, but if the land were cleared of stones good crops of grain might be grown. In its present state, however, it is better suited for cattle raising and dairy farming, an occupation already extensively followed in this and most other townships in this district. The land is nearly level and is composed of scrub land, prairie, hay meadows and marshes. The marshes are larger in area in the northerly sections of the township but generally the prairie, meadows and scrub are not confined to any particular locality, but are fairly distributed over the surface. Timber, of any value, was not noticed. Surface, or swamp water, of fair quality is plentiful. The settlers, however, now depend on wells for their supply. There are no streams nor water-powers. The climate is the same as that of central Manitoba and is therefore suitable for any kind of farming now followed

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

in that country. Fuel in this township is now becoming scarce. I saw no stone fit for quarrying and no minerals of value. Ducks are fairly plentiful during their season but other game is very scarce.—*E. Bray, D.L.S., 1905.*

This township borders on lake Manitoba, which takes off a portion of the south-west corner approximately in a line from the west boundary of section 18 to the north boundary of section 5. Along the shore of the lake is a strip nearly two miles in width, which is almost all marsh with tall rushes, reeds, and deep bogs. The remainder of the township also contains much marsh land, together with bluffs of poplar, oak and willow. A plentiful supply of hay is obtained from these marshes. The settlers in this township devote their attention to stock-raising and dairying. A limited quantity of timber suitable for building may be obtained. The soil is chiefly black loam on a subsoil of clay. An extension of the Oak Point branch of the Canadian Northern railway is surveyed through this township.—*W. Christie, D.L.S., 1906.*

This township lies on the eastern shore of lake Manitoba and is easily reached by a good trail which runs northerly from Oak Point, a station on the Canadian Northern railway. The westerly part of the township is an extensive marsh separated from the lake by a narrow sand beach; the rest of the township is broken by numerous hay sloughs. The soil generally is a black loam from six to eight inches deep with gravel and clay subsoil. There are numerous stony ridges running north parallel to the lake. The settlers are engaged in raising cattle and dairying. Some grain and vegetables are raised in some parts and appear to attain great perfection. There is quite a lot of poplar, though it is generally small. The settlers have to go a considerable distance for fuel. There are great quantities of hay along the marsh. The water in the marsh and lake appears to be good and free from alkali. Some seasons the water in the lake is so high that a large amount of the hay land is submerged. There are no streams in the township. There are no water-powers, stone-quarries nor minerals. Game, such as wild ducks and prairie-chickens, is plentiful and occasionally a deer is seen.—*W. J. Deans, D.L.S., 1906.*

20. The northern part of this township is mostly wooded, part of which has been destroyed by fire. The southern part comprises hay swamps, small bogs and ponds, all connected with Swan creek.—*W. Wagner, D.L.S., 1874.*

This township is covered with large hay sloughs and bluffs of poplar saplings. The sloughs could be easily drained into a creek which runs through the central portion. The land is best adapted to mixed farming as the soil is good consisting of a rich black loam upon a clay subsoil.—*A. F. Martin, D.L.S., 1902.*

Access to this township is easy by roads from Oak Point. The soil is of good quality but as it is generally shallow and has a gravel subsoil it is not very suitable for grain growing. Cattle raising is followed, almost exclusively, by the settlers and for that purpose this township is well adapted though grain raising could, no doubt, be followed in some sections. The land is nearly level and is made up of meadows, marshes and scrub or woodland in about equal proportions. The timber is poplar of small size, generally, and is fairly distributed over the sections surveyed, but would be of value only to the settlers for building and fencing material. Water is plentiful and generally of good quality. A creek enters the township near the north-west corner of section 31 running in a southeasterly direction and soon empties into a large marsh. It reappears as a creek in sections 29, 28 and 21 and again in sections 15 and 16. The climate is, of course, similar to that of central Manitoba. Wood is the only fuel in this locality. No stone-quarries nor minerals of value were noticed. Game of all kinds is scarce.—*E. Bray, D.L.S., 1905.*

The north half of this township is covered chiefly with poplar woods broken by marshes and small patches of prairie. Much of the first crop of timber has been

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

destroyed by fire, and a recent growth of small poplar and willow has sprung up in its place. Where the woods have escaped destruction by fire there is timber varying in size up to ten inches in diameter. In the south part of the township, sections 3, 4, 5, 6, 7, 8, 9, 10, 15 and 16, are chiefly prairie broken by marshes, hay grounds and a few small poplar bluffs. Sections 1, 2, 11, 12, 13 and 14 have less swamp and are covered to a greater extent with scrub poplar and willow. The soil is principally black loam on a clay subsoil. There appears no reason why it should not be suitable for grain growing. Stock-raising, however, occupies the attention of the settlers at present.—*W. Christie, D.L.S., 1906.*

(*East outline.*)—The country along this line is alternately poplar bush and
21. shallow marshes, with patches of willow and occasionally some open ponds or small lakes in the marshes. The land is of second-class quality.—*J. Doupe, D.L.S., 1873.*

(*Subdivision.*)—The township is almost entirely covered with timber, chiefly poplar. The soil is black loam about eight inches in depth with a gray clay subsoil. The surface is but slightly undulating, with an inclination towards the east. There is an abundance of water, good hay meadows and shelter, which makes the township especially adapted to stock-raising. There is a lake on the western boundary; it has an area of about five square miles.—*W. Wagner, D.L.S., 1885.*

Access to this township is made easy by wagon roads from Oak Point, but in wet seasons these roads are nearly impassable as no improvements have been made on them. The soil is of good quality, but is generally covered with marsh or timber, so that it is not very suitable for grain growing. Cattle raising is followed exclusively by the settlers, and to this the township is well adapted, though grain could be grown in some sections. The timber is poplar of fair size and distributed over each section. Swan creek enters the township in section 6, running southeasterly. The climate is similar to that of central Manitoba. Good water is usually found in the swamps, and is generally easily obtained by digging wells. No stone-quarries, coal nor minerals were observed. Game of all kinds is scarce.—*C. E. Bourgault, D.L.S., 1907.*

(*Traverse of Swan lake.*)—The water has receded since the last traverse of this lake (1885), by adding hay to the extent of from ten to twenty chains and in places a wider area. Between the outer edge of this hay land and the edge of the lake there is a band of tall reeds averaging from one to ten chains in width. The lake is gradually drying up and each year a band of from fifty links to a chain in width of reeds is converted into productive hay land. There is a swampy area at the south end of the lake, contained in section 18, township 21, range 5 and section 13 of the township to the west. This area is covered with tall reeds and contains two or three small areas of open water.—*A. G. Stuart, D.L.S., 1912.*

(See report for tp. 21-4—Pr.)—*G. A. Bennett, D.L.S., 1912.*

(*East outline.*)—The surface along this line is alternately dry land covered
22. with poplar, and occasional oak and marsh. The land is of third-class quality. There is a small lake in section 3, and part of another in section 24.—*J. Doupe, D.L.S., 1885.*

(*Subdivision.*)—Without drainage, this township presents but few inducements for settlement. It is very much cut up by marshes, which retain the surface water at all seasons of the year. There is no timber of any value, except small poplar which is only fit for fuel and fencing.—*M. Deane, D.L.S., 1888.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

The general aspect of this township is swampy and at the time of survey (September) was nearly all covered with water. In wet seasons settlers cannot depend on the swamps to obtain a supply of hay to feed their cattle during the winter. There are some high ridges where the soil is composed of a few inches of black loam with sand and gravel subsoil, but they are covered with poplar and windfall. Moose and deer are quite numerous.—*U. E. Bourgault, D.L.S., 1907.*

The great areas of muskegs made travelling somewhat arduous. The township has been rated as third-class on account of these muskegs and also because the land is very stony; otherwise the soil is of very good quality, although in some places the alluvial soil has been burned away. Generally, the township is a poplar and spruce brulé with a comparatively small amount of green timber; there is, however, sufficient for the settlers' purposes for many years. The general quality of the hay throughout this township is of first-class quality. The water from the wells is good but that from the surface is not, as it produces bad effects on stock. There are no streams in this township. No stone-quarries were seen. Game is becoming scarce. Frost does comparatively little damage. There is no difficulty about reaching the township from any direction excepting the northeast.—*C. F. Aylsworth, D.L.S., 1912.*

(*East outline.*)—The country along this line is timbered with poplar and
23. brush. There are a number of marshes and muskegs, the latter having tall reeds and rushes. There is a lake in section 12 and part of 13, and another small one in section 24. The land is stony and of third-class quality.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—This township, though stony in places and considerably cut up by marshes, is tolerably good. The soil generally is a sandy loam. The prevailing timber is poplar, though there are some occasional groves of spruce and birch, intermixed with willow brush.—*M. Deane, D.L.S., 1889.*

(*Partial.*)—The southwest quarter is a level, stony, poplar and spruce brulé over which the fires have run so often that the greater proportion of the alluvial soil has been burned. The southeasterly quarter of this township is also rolling and stony, but has considerable dead and green timber such as spruce and poplar. A large area of this portion is either lake or muskeg. The township may be reached by trail from either Eriksdale or Mulvihill, stations on the Canadian Northern railway, preferably from the former station. The soil of the township is suitable for mixed farming. There is considerable hay throughout the area surveyed and there will be more when the sloughs are drained. The surface water is poor but on account of the soil being of a calcareous nature, wells will produce an excellent quality of wholesome water. There are no streams in the area surveyed and, excepting around the sloughs and lakes, the land is not liable to be flooded. The climate is satisfactory for mixed farming and wheat raising. There are no stone-quarries, but an abundance of surface stone is available for all purposes; in fact, there are too many. There are no minerals of any description as far as could be observed. The tracks of deer and moose were everywhere, but about the time we arrived they evidently left this comparatively open area for the more wooded and better sheltered country to the northeast. Rabbits were exceptionally plentiful, also prairie-chickens and partridges. It will require a great amount of labour to clear the surface of the area surveyed of the stones and boulders.—*C. F. Aylsworth, D.L.S., 1912.*

(*North and east outlines.*)—The country along these lines is nearly all poplar
24. bush, with many scattered hay marshes. There is a lake in the northeasterly part of the township, the shores of which are low and marshy. There are a few oak trees on the points of land stretching out into the lake. The soil is a sandy loam, stony, and of third-class quality.—*J. Doupe, D.L.S., 1875.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

(*Subdivision.*)—This township is situated about twelve miles due east of Dog lake, or about twenty miles northeast of Dog Creek I. R. It is doubtless most easily reached from some point on the east shore of lake Manitoba, although we reached it by means of a trail cut from the east. The soil is composed chiefly of loam with clay and in some places gravel subsoil. The surface is fairly level and well wooded, but contains a very large percentage of swamp land. In the southern part of the township there is a large fresh-water lake which possesses a very swampy, ill-defined shoreline. The township contains a considerable amount of growing timber; the most valuable of which is chiefly spruce and tamarack and occupies the north-easterly part of the township, being confined chiefly to sections 24, 25, 36, 35 and 34. The northwesterly part of the township is chiefly *brulé*, whilst the central, westerly and southern portions are chiefly composed of swamp lands. This township contains a large percentage of swamp land and during the past season when the survey was being made, the country was so exceedingly wet that what might, during average seasons, be good hay land, was found to be flooded. In several localities hay was noted, chiefly in sections 1, 2, 3, 9, 15, 16, 28, 33 and 35. This township is most abundantly supplied with water not only in the numerous marsh lands, but also by means of a large body of water named Stewart lake, occupying portions of sections 2, 3, 9, 10, 11, 15 and 16, and also by a portion of Sleeve lake which occupies the north-easterly part of sections 25 and 36. Both of these lakes are fresh water and it is said that in Sleeve lake an abundance of fish of various kinds may be caught. No water-power is known to exist upon this township. Judging from the growth of vegetation noted in this locality, I would say that the climate is quite favourable for the pursuit of general agriculture. No summer frosts were experienced and during the past season the weather was extremely wet and productive of great growth. Occasionally the summer temperatures are exceedingly warm, although somewhat tempered by cool breezes either from lake Winnipeg or lake Manitoba. During the winter season the weather is usually fine and cold. Forty degrees below zero was about the lowest temperature recorded during the past winter. In the growing timber this township possesses an abundant supply of fuel for local uses, and in the *brulé* sections of the township there is also a large amount of standing dead timber as well as fallen wood, which affords an excellent supply for immediate use. No stone-quarries nor minerals of economic value occur in this township. Small game, such as prairie-chickens and ruffed grouse, was occasionally met with. Moose are common, and several herds of fine elks were sighted.—*J. W. Tyrrell, D.L.S., 1907.*

This township may be easily reached by trail or boat from Oak Point, or

25. by boat from Westbourne to Silver Bay post office in township 26, range 8.

From this point we opened up a trail which runs in an easterly direction across ranges 8, 7 and 6, entering this township in section 18. The trail from here runs easterly and to the north of Little Birch lake, leaving the township in section 13. The soil consists of a good black loam with a clay subsoil but is badly broken up by sloughs and lakes, and is not very desirable for farming purposes. The surface is gently rolling or level. The western half has been mostly burned over and is covered with poplar and willow scrub and some standing dead timber. The easterly half of the township has suffered very little from fire and is mostly covered with heavy bush. There is considerable spruce, tamarack, jackpine and poplar timber from ten to sixteen inches in diameter. A small amount of hay could be cut around most of the sloughs. There are numerous lakes and ponds which furnish a permanent supply of fresh water. There are no streams but the lakes are joined by wet sloughs in most cases. Frosts were quite common after August 18. There is an abundance of dry wood for fuel, but there are no lignite veins, stone-quarries nor minerals of economic value in the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

township. Moose, elks, bears and timber wolves are plentiful. There are a few partridges. Ducks were plentiful, while jackfish are found in most of the lakes.—*C. M. Teasdale, D.L.S., 1908.*

26. The railway point most convenient to this township at present is Gimli on the Canadian Pacific railway, in tp. 19-4-E. From here the Lake Winnipeg shore road is followed north as far as Hnausa; thence the route is westerly along the Icelandic River road to Vidir, from which point the surveyors' road is used. The road as far as Vidir under normal conditions is good with the exception of about two miles of swamp just south of Vidir which is very soft in a wet year. The surveyors' road in a dry year, such as the present, is good throughout, but in wet seasons there would be a number of soft places on it. The soil may be described as suitable for general farming, the surface soil being a black loam from three to six inches in depth on a clay subsoil. In many localities, however, the soil is very stony, which detracts greatly from its value as a farming district. The surface of the country is almost entirely wooded, although much of it has been burnt over and a thick second growth of poplar has sprung up. There is considerable swamp scattered throughout the whole township, but most notably in sections 1, 3, 4, 7, 8, 9, 10, 13, 17, 19, 20, 29, 28, 25 and 34. While the country may be described as almost entirely wooded, much of it is covered with small swamp spruce and tamarack, second-growth poplar and burnt timber, unsuitable for lumbering purposes. Considerable good timber consisting of white spruce, tamarack and white poplar of an average diameter of about twelve inches is obtainable in sections 13, 14, 22, 23, 24, 27, 28, 29, 31, 32 and 33. Hay of fairly good quality grows in large quantities on the edges of the numerous swamps scattered throughout the township, and also upon hay meadows noticed in sections 2, 3, 7, 10, 18, 23, 25 and 26. Good fresh water may be obtained in any section of the township by digging a few feet. Sections 27 and 34 are watered by a long, deep, narrow slough, very much resembling a creek but with no apparent flow. Lakes of good fresh water are found in sections 3, 9, 10, 29 and 32. No apparent water-powers occur. The climate may be described as suitable for general farming, no summer frosts being observed. The township is very plentifully supplied with wood fuel, which can be obtained in any section of the township. No coal nor lignite veins are known to exist. No stone suitable for quarrying was observed, although in section 36 there is an extensive ridge of gravel suitable for concrete. No minerals of economic value were found. Big game is very plentiful, many fine moose and elks being observed. Partridges and prairie-chickens are also plentiful.—*J. W. Tyrrell, D.L.S., 1909.*

27. The railway point most convenient to this township at present is Gimli on the Canadian Pacific railway in tp. 19-4-E. From here the Lake Winnipeg shore road is followed north as far as Hnausa; thence the route is westerly along the Icelandic River road to Vidir, from which point the surveyors' road is used. The road as far as Vidir under normal conditions is good with the exception of about two miles of swamp south of Vidir which is very soft in a wet year. The surveyors' road during a dry year, such as the present, is good throughout, but in wet seasons there would be a number of soft places on it. The soil may be described as suitable for general farming, the surface soil being usually a black loam or clay from three to six inches in depth on a white clay subsoil. In many localities, however, the soil is very stony. The surface of the country is of rolling nature with scattered stretches of swamp and may be described as entirely wooded. The east and southeasterly portions of the township are very largely swamp. While the country may be described as almost entirely wooded, much of it is covered with small swamp spruce and

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

tamarack, small second-growth poplar and burnt timber, unsuitable for lumbering purposes. Considerable good timber consisting of white spruce, tamarack and white poplar averaging about twelve inches in diameter is, however, obtainable, most notably in sections 13, 14, 15, 18, 19, 21, 22, 30 and 31. Considerable hay of fair quality is found on the edges of the swamps, but very few of what could properly be described as hay meadows were observed, the only two noticed being in sections 15 and 16, and sections 22 and 23. Good fresh water may be obtained by digging in any section of the township. Sections 10, 15, 14, 23, 24 and 25 are watered by a sort of long, narrow slough or creek with no apparent current, and which, here and there, disappears in a swamp. No water-powers are found. The climate may be described as suitable for general farming, no summer frosts being observed. This township is very plentifully supplied with wood fuel. No coal nor lignite veins are known to exist. No stone suitable for quarrying nor minerals of economic value were discovered. Big game is very plentiful, many fine moose and elks being observed. Partridges and prairie-chickens are also plentiful.—*J. W. Tyrrell, D.L.S., 1909.*

(*North outline.*)—This township is gently undulating, and consists of low
28. ridges, timbered with poplar, spruce, tamarack and jackpine, and separated by tamarack swamps, muskegs and hay marshes. The greater part of the timber has been killed by fires. The soil is chiefly a shallow layer of black loam overlying sand or gravel.—*W. Christie, D.L.S., 1907.*

(*East outline.*)—The eastern side of the township is of a very swampy nature with some dry land and poplar ridges intervening. The swamp lands which predominate are thinly wooded with scrub tamarack, and the higher lands chiefly with white poplar and a few scattered spruce and tamarack, the largest of which measure about twenty-four inches in diameter. Mantagao river takes its rise in this locality, and hence the wet nature of the surface. The top-soil of the higher lands consists of black loam to a depth of about six inches with a dark clay subsoil. A small body of fresh water, which has been named Plum lake, covers the northeastern part of section 24 and the southeastern part of section 25. This locality is perhaps better suited for stock-raising than for general farming.—*J. W. Tyrrell, D.L.S., 1909.*

(*Subdivision.*)—This township was reached by means of a wagon road from Moosehorn, a station on the Canadian Northern railway. Part of this road had been constructed from Moosehorn to a portable sawmill located in section 31, township 26, range 5, and was used as a winter road, it being considered too bad for teaming in the summer on account of the muskegs and swamps. From there we had to cut our own road, keeping on the higher land as much as possible, but in many cases it was necessary to cross a neck of a swamp or muskeg to locate the camps so as to be convenient for our work. The road is hardly fit for summer teaming, it being very hard on the teams because of the stumps and swamps which make it impossible to haul anything but a small load. Three horses and a team of oxen were lost in transportation during the season's work, which will give some idea of the difficulty of getting supplies into this country in a wet season. The surface consists of low ridges covered with spruce, poplar, tamarack and some birch and jackpine, separated by tamarack swamps and muskegs so that probably from one-third to one-half of the area would be too wet for agriculture at present. To make good farming land it would be necessary to construct a drainage system in order to allow an outlet for the water lying in the low bottom lands. The ridges are generally black muck or clay loam on top with a clay subsoil, although gravel and sand are found in some places. A considerable portion of the dry land is too stony to be suitable for farming. The land would probably be better suited for stock-raising than for the growing of grain. The township is well timbered

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Continued.*

with poplar, spruce, tamarack, jackpine and birch, with hazel, willow and alder underbrush. There is no prairie, the only untimbered country being the wettest part of the muskegs. The timber would average seven inches in diameter, with poplar and spruce predominating. A large percentage of the northwestern part of this township has been burnt over leaving very heavy windfalls in places. There are no good hay lands. The only hay obtainable is in the marshes which appear to be too wet for access during an ordinary season. Very few streams are found, and these are small, generally being merely channels from one swamp or muskeg to another. There is, however, an abundance of surface water in the swamps and muskegs. Owing to the exceptionally wet season last year, there was water on all the lower lands, and it is probable that in a dry year water would be more difficult to obtain, but this could be overcome easily by digging wells. The water is fresh. No water-power could be developed. The climate is similar to that of northern Manitoba in general, but subject to extremes of heat and cold. There was a great deal of cloudy, wet weather during the summer and fall. No summer frosts were observed. No coal is known to exist in this locality, but wood fuel is easily obtained anywhere in the forest, there being plenty of dry, dead timber to be found in most places. No stone-quarries nor minerals of any kind were found. The country is well stocked with game. Moose and elks are plentiful, and deer of the variety called jumping deer are seen occasionally. Bears are quite frequently met with. Of smaller game, partridges, grouse and rabbits are fairly plentiful.—*E. P. Bowman, D.L.S., 1912.*

This township was reached by trail to the northeast corner of township

29. 29, range 6. The surface is somewhat rolling, that is, it has a series of low, narrow, gravelly ridges trending in a northwesterly direction. These ridges usually have stretches of wet marshes and muskeg bordering and extending along the westerly side, with spruce muskeg and swamp along and adjoining the easterly side. The soil is sand and gravel on the ridges with clay and gravel in the low lands, and from a farming point of view would be considered useless. The southerly third of the township is thickly timbered with standing, dry spruce, tamarack and heavy windfall, and the remainder consists mostly of green spruce swamp with narrow ridges. The ridges are covered with clumps of poplar and jackpine timber up to ten inches in diameter with oak, hazel and poplar scrub. The spruce and tamarack in the swamps are very scrubby on account of so much water; there are a few clumps with timber ranging up to ten inches in diameter. There is a considerable quantity of inferior hay in the marshes along the ridges. The water is fresh and good, and a plentiful supply may be procured by digging. There are no streams nor watercourses. Heavy rains will fill the swamps and marshes as the natural drainage is slow. The climate is good. Plenty of dry spruce for fuel may be obtained in the southerly and southeasterly portions, and green spruce and tamarack in the northerly and westerly parts; in fact, the whole township with the exception of a few sections along the western boundary has plenty of fuel. No coal, stone-quarries nor minerals were seen. Moose, elks, small deer, prairie-chickens and grouse are very plentiful. There are also a few coyotes and muskrats.—*J. Gibbon, D.L.S., 1912.*

This township was reached by travelling along the narrow ridge which runs

30. in a northwesterly direction through sections 4, 9, 8 and 7. At the time of survey it was impossible to go further north or east than section 8, where our first camp was located. Transportation of outfit is almost impossible until after the freeze-up. This township could not be considered very good for farming purposes at present as it is mostly wet. The soil consists of a shallow layer of loam, intermixed

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 5.—*Concluded.*

with clay, and a gravel and sand subsoil. If drained, portions of the township would show good soil. The surface is comparatively level with a few low, gravelly ridges. The west half is somewhat open with scattered dry timber and light scrub. There is considerable marshy land with gravel bottom. The southeasterly quarter is very wet and swampy with a growth of green spruce and tamarack, mostly of small size. Farther to the north there is small jackpine scattered throughout, even though it is wet, which means that a gravelly bottom is usually found where the pine grows. There is very little hay. A good supply of fresh water may be easily procured by digging to the gravel. There are no streams nor watercourses. Heavy rains will keep the swamp and marshy lands full of water, the drainage being very slow and most of the water being carried off by evaporation. The climate is good with slight summer frosts. The fuel supply is limited as there is not much dry timber and the green spruce is mostly of the stunted variety. No coal, stone-quarries nor minerals were seen. Moose, elks and small deer are plentiful, also prairie-chickens and grouse.—*J. Gibbon, D.L.S., 1912.*

RANGE 6.

This is a small fractional township to the east of lake Manitoba, containing
19. about 3,000 acres. The land is of a first-class quality, excepting that immediately along the shores of the lake, which are low and marshy. All the land in this township is occupied by settlers.—*W. Wagner, D.L.S., 1873.*

The township is easily reached by a good trail from Oak Point settlement on lake Manitoba. The soil is generally a black loam with stone and clay subsoil. I think it would be suitable for cattle-raising and dairying. The township is level and broken by marshes; a very extensive one lies in section 35. There are quite a number of bluffs of poplar and some oak, generally small but large enough for fencing and fuel. There are large quantities of hay in all parts of the township. The water in the marshes is fresh and good and unlimited in quantity. The climate is good and there are no summer frosts. There are no stone-quarries, water-powers nor minerals of any kind in the township. Game, such as wild ducks, abounds. There are great quantities of small wild fruit in the bluffs. The settlers are engaged in cattle-raising and dairying, and in winter do some fishing in the lake which abounds with whitefish, pickerel and jackfish. A good market is found at Oak Point for fish, which are shipped to various parts of Canada and the United States.—*W. J. Deans, D.L.S., 1906.*

This township lies to the east of lake Manitoba. It is timbered with poplar,
20. oak, elm and ash, fit for building timber. The surface is level, and the soil is good black loam.—*W. Wagner, D.L.S., 1873.*

This township is bordered on the west by lake Manitoba, the lands in the vicinity of which are swampy and very likely to be flooded in the spring. The country is all wooded but there is no timber of any value. The soil consists of black loam with subsoil of clay and in some places clay and gravel. Good water may be obtained anywhere in the township. There are a few settlers in the district, all of whom have taken up stock-raising.—*A. F. Martin, D.L.S., 1902.*

No difficulty is found in reaching any part of this township by roads now open to Oak Point. The soil is of good quality but as it is only a few inches in depth, is stony, and has a gravel subsoil it cannot be generally rated better than second-class, and for the same reasons this township is, at present, more suitable for raising cattle than for any other purpose. Potatoes and other vegetables are generally a good crop, and in the very few cases where the settler cleared the land of stones, good crops of grain were grown last season. The land is nearly level and on the part surveyed is composed of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

woods, scrub land and hay swamps, the woods and scrub being about equal in proportion. The timber will average about seven inches in diameter and at present has no commercial value other than supplying the settlers with building and fencing material. Sections 1, 2 and 3 may be classed as meadow land with scattered bluffs of woods and scrub and the land bordering on lake Manitoba has the same general character. There are no streams nor water-powers. Fair water is easily found in the swamps and is generally easily obtained by digging wells. I noticed no summer frosts. Wood is the only fuel here, but it is sufficiently plentiful to last many years if it is taken care of. Fixed limestone was noticed in section 34 and in section 29. In the latter section some lime had been manufactured. No minerals of any value were found. Ducks are plentiful around lake Manitoba but other game is very scarce.—*E. Bray, D.L.S., 1905.*

This township borders on lake Manitoba, about one-fifth of it being occupied by the lake. Along the shore of the lake is a strip of marsh, much of which produces an excellent crop of hay. The remainder of the township is chiefly covered with woods, principally poplar, with a few oaks, and is broken by numerous marshes, muskegs and hay lands. There is plenty of timber to satisfy the needs of the settlers for building purposes and for fuel. The soil is chiefly black loam on a clay subsoil. The settlers devote their attention chiefly to stock-raising and dairying, but a few apparently successful attempts have been made at grain-growing. I noted particularly an excellent crop of oats in section 20, and in section 32 an excellent crop of oats and barley was growing at the time the survey was being made. The extension of the Oak Point branch of the Canadian Northern railway also passes through this township.—*W. Christie, D.L.S., 1906.*

This township is generally level with a slight descent to the southeast. The

21. land is good, but much broken by marshes, covered with reeds and willows.

The soil consists of an alluvial layer of black loam, from eight to twelve inches in depth, with a subsoil of clay. There is some splendid timber, especially in the northern part. The township is well adapted to settlement. There is a lake along the eastern boundary with an area of about five square miles.—*W. Wagner, D.L.S., 1912.*

(See report for tp. 21-5-Pr.)—*A. G. Stuart, D.L.S., 1912.*

The township is entirely covered with bush, except where the surface is

22. broken by lake or marsh. The timber is chiefly poplar, much of which, however, is of an inferior quality. There is a limited supply of excellent spruce.

The water is generally poor owing to the presence of alkali. The surface is gently rolling. The land appears cold owing to the hard, impervious nature of the subsoil. On the whole, I do not consider the township a very desirable location for settlement.—*J. H. Brownlee, D.L.S., 1888.*

From Oak Point, a station on the Canadian Northern railway, there is a good wagon road to Deer Horn. From there I cut a trail to section 28 of this township. Access is also easy by another road cut by settlers last summer in sections 3, 4, 9, 16, 21 and 28. The surface is generally timbered with poplar eight to eighteen inches in diameter and scattered big spruce and willow, interspersed with hay marshes and lakes. Hay can be procured in many of the marshes, but in a wet season like last summer few if any of the marshes can be entered. Settlers had a very hard time to cut hay for their own cattle, some of them were obliged to cut hay in water and haul it with a sleigh and a pair of oxen to a high place to dry. Some of them were forced to sell their cows or send them away for winter. July, August and September were very wet. The soil is of good quality, black loam, clay and sand subsoil, but the expenses incurred in clearing the land from green and dry wood will be too great now for farming. For this reason this township is better suited for stock-raising than for

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

anything else. The water is fresh and during all summer about half of the surface is flooded to the depth of from four inches to two feet. The surface is level and there are no streams to drain it. A few jumping deer were noticed. No minerals of any value were found.—*C. E. Bourgault, D.L.S., 1907.*

This township was reached by my own trail from township 24, range 6, **23.** which enters the township from the north, at the northeast corner of section 33, and is in good condition. In the south it is entered by an old Indian hunting trail from Lundar. This trail crosses section 2 and follows the marshes and muskegs; it was very soft and wet at the time of the survey. The soil is chiefly black loam from four to ten inches on a clay subsoil. The high land would grow all the cereals but it is much broken by marshes and muskegs. The surface is all timbered but has been fire-swept recently and a great deal of the timber has been killed. Many large marshes occur in the north and west parts of the township. The timber is black and white poplar and scattered spruce from six to fifteen inches in diameter. A great deal of it has been fire-killed and much of the living poplar has dry rot and is useless for lumber. The large marshes were full of water at the time of the survey (October), and were covered with a sour muskeg grass. A few scattered hay marshes occur, however, and some good marsh grass is found to the northwest of a lake in sections 7 and 18, but this was too wet to cut at the time of the survey. Fresh water is everywhere obtainable in the marshes and muskegs, and on the ridges by digging a few feet. A small stream, not suitable for water-power, enters section 4 from the south and finds its way westward through a chain of marshes to Dog lake. The climate is moderate with only slight frosts at the time of the survey. Fuel is everywhere abundant in the form of standing fire-killed trees and windfall. No stone-quarries nor minerals were found. The game is moose, elks and ducks.—*J. L. R. Parsons, D.L.S., 1906.*

(*North outline.*)—Along the north boundary the soil is a clay loam, stony, **24.** and of second-class quality, and is nearly all covered with poplar bush. There are a number of scattered marshes.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—This township was reached by my own trail along the north boundary of section 13, township 24, range 7, thence northerly through section 19, township 24, range 6, to its north boundary, thence easterly along the north boundary of sections 20 and 21, thence south southeasterly across sections 22 and 15, thence south along the east boundaries of sections 10 and 3. It is a fair trail. The soil is black loam of an average depth of four inches over a clay subsoil. The subsoil is in most places mixed with stones and boulders to such an extent that only small areas could be cultivated. The township is chiefly useful for grazing. The surface is scrubby with scattered bluffs of poplar and spruce. Only a very small amount of timber exists in the township in the form of small scattered bluffs of poplar from one to eight inches in diameter and spruce from three to eight inches in diameter. Hay of fair quality is to be found in the numerous marshes in the township. Fresh water is everywhere obtainable in the marshes or on the ridges by digging a few feet. No streams occur. The climate is moderate with only a few slight frosts at the time of survey (September). Fuel is to be found throughout the township in the form of windfall and fire-killed standing poplar and spruce. No stone-quarries nor minerals were found. The game is moose, elks, ducks and prairie-chickens.—*J. L. R. Parsons, D.L.S., 1906.*

Silver Bay post office in township 26, range 8, can be reached by trail from **25.** Oak Point, or by boat from Oak Point or Westbourne. From this point a trail runs in an easterly direction, entering this township in section 18, and leaving in section 13. The soil averages about six inches of black loam but has mostly

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

a gravelly or stony subsoil, and is not well adapted to farming. The surface is level or gently rolling and is covered with poplar and willow scrub and windfall. There is very little timber in the township as only small scattered clumps of spruce have escaped the fires. The timber is not suitable for lumbering but would make good building logs. Good hay is scarce. There is no surface water that is permanent but good water can be obtained by digging around any of the sloughs. There are no streams and no available water-powers. Hard frost appeared on August 18. Dry spruce and poplar wood is plentiful but there are no lignite veins, stone-quarries nor minerals of economic value. Moose, elks, deer, bears and wolves are abundant. There are a few prairie-chickens and partridges.—*C. M. Teasdale, D.L.S., 1908.*

This township may be reached by taking the mail trail or boat from Oak
26. Point, situated near the south end of lake Manitoba, to Silver Bay post office in township 26, range 8. From this point we opened up a trail in an easterly direction, entering this township in section 31 and terminating in section 21. The soil is principally a loam with a clay subsoil and should be suitable mostly for farming. The whole township is covered with scrub with a few scattered clumps of spruce. There is a small amount of timber in sections 4, 9, 30 and 31 and also smaller clumps around some of the sloughs in the north and east portions of the township. None of the sloughs in this township produce a good quality of hay. There is a permanent supply of good water in the numerous muskegs but there are no streams. There is no available water-power. The summer was very dry and warm. Frosts occurred up to June and after August 18. There is considerable dry standing spruce and jackpine which is found almost all over the township. There are no coal nor lignite veins. No stone-quarries nor minerals of economic value were found. Moose, elks and bears are quite plentiful. There are also a few partridges and prairie-chickens.—*C. M. Teasdale, D.L.S., 1909.*

This township may be reached by taking the trail from Oak Point, or by boat
27. from either Oak Point or Westbourne, to Silver Bay post office in township 26, range 8. From this point we opened up a trail in a northeasterly direction, entering this township near the centre of section 18 and running northeasterly to section 28. The soil is a black loam with a clay subsoil in most parts, and should make good farming land. The land is either level or gently rolling and is covered with poplar and willow scrub and large areas of spruce and jackpine which has been mostly fire-killed for several years. There are a few clumps scattered over the township both of spruce and jackpine which would provide good building material. There is very little good hay in the large sloughs but some smaller ones were noticed which would produce excellent hay. There would be a good supply of water in most of the sloughs, except in extremely dry years, when quite a few would dry up. There are no streams and no available water-powers. The summer was fairly dry and warm but frost was noticed on August 18. There is an abundance of dry standing spruce and jackpine for fuel. There are no coal or lignite veins, stone-quarries nor minerals of economic value. Moose and elks are quite plentiful. There are a few bears and wolves. Partridges and prairie-chickens are fairly plentiful.—*C. M. Teasdale, D.L.S., 1909.*

(*North outline.*)—The land is level and the soil is good in sections 31, 32,
28. 33 and 34. Throughout sections 35 and 36 the country is generally swampy excepting a few ridges in section 35.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—The west boundary of the township passes through some very fair land which is covered principally with small scrub and dry standing spruce and jack-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

pine. The north and east boundaries pass through dry standing timber and the land is more rolling, the ridges being gravelly or sandy. Most of the land along the north boundary is not well adapted to farming but the land improves toward the south. There are some very large muskegs in this township. Almost all the timber has been fire-killed. Game was quite plentiful, many moose being seen during the survey. Partridges were also plentiful.—*C. M. Teasdale, D.L.S., 1909.*

This township was reached from Moosehorn, a station on the Hudson Bay branch of the Canadian Northern railway, by trail running west along the southern boundary of township 27, range 8, to a sawmill about twelve miles distant. This trail was followed for about seven miles, when we turned north through township 27, range 8, entering township 28 at section 4. We then traced our way north to section 33, township 28, range 6, where our first camp was located. This route was found to be passable for light loads in dry weather but will not stand much rain owing to numerous old marshes and low-lying lands which quickly fill up during heavy rains. The soil is mostly a light loam from three to six inches in depth, with a clay or gravel subsoil, and is somewhat stony in places; it might be suitable for light farming and stock-raising. There are some quarter-sections of fair soil, but on the whole the land can only be classed as second-rate. The surface is gently rolling with some low, dry, stony ridges, intercepted with numerous open and willow marshes and other arable lands that gradually dry up during a dry period. There is a light willow and scrub undergrowth with clumps of green and dry jackpine on the ridges, and on the lower lands there are belts of green and dry spruce, mostly all of small size; there are a few small patches up to six and eight inches in diameter which are of no value except for fuel purposes. The eastern half of the township has been burnt over and has a good deal of dry timber and windfall with some clumps of green spruce and jackpine. The western half has numerous open stretches of willow marsh and clumps of small green jackpine. There is no hay land of any account, although a good deal of feed could be gathered but it is of poor quality. The water is fresh and of good quality and can be procured by digging without much difficulty, as gravel is usually reached at a comparatively small depth; the supply is plentiful. There are no running streams nor water-courses. Heavy rains will fill up the marsh and low lands until drainage is supplied to carry off the surplus water. There are no water-powers. The summers are fine; there is a good growth and the usual favourable climatic conditions of the fertile belt of Western Canada; only very slight summer frosts were in evidence. Green and dry spruce timber can be procured on almost any quarter-section in limited quantities, but principally on the eastern half of the township. No coal, stone-quarries nor minerals were seen. Moose, elks and small deer are plentiful also prairie-chickens and grouse.—*J. Gibbon, D.L.S., 1912.*

This township was reached by a trail running north through the west half
29. to section 28. The southern third consists of low, dry ridges trending in a northwesterly and southeasterly direction with swamps. Marsh and muskeg are features of this country, making it hard to travel either east or west. The soil consists of light loam to a depth of from three to six inches with a clay or gravel subsoil. It is somewhat stony and could be adapted only to light farming and stock-raising on a limited scale. The surface is rolling with some low, stony and gravel ridges trending northwest and southeast, intercepted by marshes and swamp lands. The ridges are covered with clumps of green and dry jackpine while on the low land there is spruce, tamarack and poplar with an undergrowth of scrub willow and poplar. The southerly third and southeasterly quarter has a good deal of standing, dry timber and windfall, and there is a stretch of green spruce swamp running northerly through the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

easterly half of the township. The westerly third is mostly green with clumps of jackpine and some spruce, only a small proportion of the timber reaching eight inches in diameter. There are no hay fields of any account; rough feed of a poor quality can be procured. A fine supply of good fresh water can be obtained by digging wells, the whole country being underlain with gravel. There are no streams nor watercourses. The low land and marshes will be filled up during heavy rains unless a system of drainage is supplied or an extended period of drought evaporates the water. No water-power can be developed. The climate during the summer is fine with good growth and very slight summer frosts. For fuel there is green and dry spruce on almost every section in limited quantities, but principally in the southerly portion and southeasterly quarter. No coal, stone-quarries nor minerals are known to exist. Moose, elk, small deer, prairie-chickens and grouse are plentiful, also some coyotes.—*J. Gibbon, D.L.S., 1912.*

This township may be reached from Fairford, a station on the Canadian

30. Northern railway, by boat along the Fairford river and across lake St.

Martin to the northeast quarter of section 12, township 30, range 8. From this point there is a wagon road running in an easterly direction to this township. There is also an old wagon road around the south end of lake St. Martin through township 29, ranges 7 and 8 to the northeast quarter of section 33, township 29, range 7. From this point we made a road across sections 3, 2 and 12 to the northeast quarter of section 12, township 30, range 7, and thence northeasterly to section 33 of this township. The soil in the western part of the township is mostly gravel with a clay subsoil with about three inches of gravelly loam on the surface. In the northwesterly portion there is considerable limestone rock as well as gravel with a clay subsoil; this part is too rocky to be first-class land. The eastern two-thirds of the township is mostly flat and swampy and has a surface soil of black muck to a depth of six inches with a subsoil of gravel or clay. This would be good land if drained, but in the present state is too wet to be of any use as farm land. In the southwestern part of the township there is some fairly good land, but the greater part of it is too gravelly to be especially adapted to farming purposes. In sections 29 and 32 and the west part of section 33 there is a large tract of dry slough which is first-class land and can be easily broken up as there is only small scrub on the most of it. In the western part of the township there is a strip of land about one and a half miles wide and extending from south to north which is rolling and in many places rocky with gravel. This part is covered with alternate areas of jackpine from three to eight inches in diameter, and jackpine and willow scrub with scattered dead jackpine. Sections 26, 27, 28, 33 and 34 are also rolling and are nearly all covered with small jackpine up to six inches in diameter. The remainder of the township is nearly level, consisting of wet sloughs and swamp, and is very wet; about half of this area is open with willow and tamarack scrub, while the other half has spruce and tamarack averaging about six inches in diameter. The timber in this township is nearly all small and has no great commercial value. In section 17 and the southeasterly part of section 20 there is some fairly good jackpine, about ten inches in diameter. There is very little available hay, owing to the fact that the sloughs are nearly all too wet to produce hay and the dry areas are nearly all covered with jackpine and willow scrub with only a few small openings on which any hay is found. There are two small lakes in the easterly portion of sections 5 and 8 and one in the southerly part of sections 15 and 16. All of these lakes are surrounded by swamp or open muskeg and their shores are soft and low, but there is very little danger of flooding as there are no streams flowing into them, the water soaking in gradually through the muskeg. The water in these

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

lakes contains considerable vegetable matter and is of a brownish colour. There are no creeks and no other water except in the sloughs and muskegs. There are no water-powers. In the autumn, during the time of survey (after September 28th), the climate was very agreeable. According to information from settlers living about twenty-five miles from here, there are seldom any summer frosts. The timber of the township furnishes the only fuel. It is fairly evenly distributed and will be sufficient for the settlers for some time. There is considerable limestone rock of good quality in the northwestern part of the township, especially in sections 20, 29, 30, 31 and 32. All the hills in this part have considerable limestone rock in them. There is a hill in the northern part of section 32 which is composed almost entirely of pure limestone. No other minerals were found. Moose and elks are fairly plentiful, and some tracks of bears were found. Mink, foxes, weasels, muskrats, coyotes and rabbits are fairly plentiful. There is also an abundance of partridges and prairie-chickens.—*J. E. Jackson, D.L.S., 1912.*

This township may be reached from Fairford, a station on the Canadian
31. Northern railway by boat along the Fairford river, across lake St. Martin and through The Narrows to the northwestern part of section 8, township 32, range 6. From this point there is an old wagon road running southeasterly across sections 8 and 5 to the northern portion of section 32 of this township; thence the road extends across the township in a southerly and southeasterly direction. This township may also be reached by an old wagon road around the south end of lake St. Martin to the northeast quarter of section 33, township 29, range 7, thence easterly and northeasterly across sections 3, 2 and 12, township 30, range 7, thence northeasterly and northerly across township 30, range 6, to the southern part of section 4 of this township. From this point we made a road northeasterly and northerly to the southern part of section 35, also one northerly to the northwestern part of section 33, and lastly one running northeasterly across section 4 and thence westerly to the southwestern part of section 7. The surface in the western and northwestern parts of the township is nearly all rolling and more or less rocky, except an area comprising sections 19, 30, 31 and parts of sections 29 and 32 which is all very wet, mossy spruce and tamarack swamp. The high land in this area consists generally of gravel and clay with a considerable quantity of limestone boulders. There are a number of ridges of almost pure gravel in this area and also a number of ridges of almost pure limestone rock. Most of this area is too rocky or gravelly to be particularly suitable for farming. There is an area of fairly level and dry land in the eastern part of the township, consisting of sections 13, 14, 23, 24, 25, 26 and parts of sections 11 and 12 which has sandy loam on the surface to a depth of two or three inches with a gravel subsoil. This would make fairly good farm land. Sections 35 and 36 are very swampy. Sections 1, 2 and most of sections 11 and 12 are composed of alternate areas of dry level land with gravel subsoil and wet muskegs with small scrub. The high land is mostly covered with alternate areas of jackpine from three to six inches in diameter and jackpine scrub. The eastern half of the township is nearly level land covered with small spruce and jackpine from three to six inches in diameter with many smaller areas of very wet muskeg covered with willow scrub. The timber is nearly all small, very little of it exceeding ten inches in diameter, and is therefore not of much commercial importance. Its chief value will be to the settlers in their building operations and for fuel. The western half of the township is mostly covered with alternate areas of small jackpine from four to six inches in diameter and scattered dead jackpine from eight to ten inches in diameter with jackpine scrub. The northwestern part of this area is swamp covered with spruce and tamarack from four to eight inches in diameter. There is very little hay in this township, owing to the fact that the sloughs are nearly all too wet to produce hay and the dry ones are nearly all covered with willow and jackpine scrub.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Continued.*

The western half of the township is very dry, there being hardly any water for drinking purposes. A small creek of fresh water flows through section 36; it is about four feet wide and eighteen inches deep. There is a small lake on the eastern boundary of section 29. The water of this lake contains considerable vegetable matter and is brown in colour. There is no other water in the township except that contained in the sloughs and muskegs. There are no water-powers. The climate in the autumn, during the time of survey (after September 28), was very agreeable. According to the settlers living on the west side of lake St. Martin, there are seldom any summer frosts. The fuel supply is furnished by the timber, which is fairly evenly distributed and will be sufficient for the settlers for a considerable time. There are a number of ridges of good limestone rock in the western part of the township, especially in sections 5, 6, 8, 29 and 32. There is also a considerable quantity of limestone boulders scattered over the surface of this portion of the township. Moose and elk are fairly plentiful, and signs of bears were found. Minks, foxes, weasels, muskrats, coyotes and rabbits are quite plentiful. There is an abundance of partridges and prairie-chickens.—*J. E. Jackson, D.L.S., 1912.*

This township may be reached from Fairford, a station on the Canadian

32. Northern railway, by boat along the Fairford river, across lake St. Martin and through The Narrows to the northwestern part of section 8 of this town-

ship. From this point there is an old wagon road running southeasterly across sections 8 and 5. It may also be reached from Fairford by an old wagon road around the south end of lake St. Martin to the northeast quarter of section 33, township 29, range 7, thence easterly and northeasterly across sections 3, 2 and 12, township 30, range 7, thence northeasterly and northerly across township 30, range 6, to the southern part of section 4, township 31, range 6, and thence northerly across this township to the southeastern part of section 5 of this township. There is a small area of rolling, dry land, comprising most of sections 4 and 9, the eastern part of section 5 and the southeastern part of section 8. The soil in this area consists of a sandy loam to a depth of two or three inches with a gravel subsoil. This area contains fairly good land. The remainder of the township is almost entirely composed of mossy spruce and tamarack swamp and is very wet. The soil in this area is nearly all black muck to a depth of from fifteen inches to two feet, with a clay subsoil. This would be good land if it could be drained, but at present it is far too wet to be of any use as farm land. Most of sections 4 and 9, the eastern part of section 5 and the southeastern part of section 8 are covered with alternate areas of jackpine from six to ten inches in diameter, and *brulé* with jackpine scrub. The hills are nearly all composed of limestone gravel. The remainder of the township is nearly all very level and wet, being nearly all spruce and tamarack swamp with a very few small areas of open muskeg. Most of sections 3 and 10, the northeastern part of section 9 and about one-half of sections 16, 15 and 11 are covered with good timber, being composed of spruce, poplar and jackpine from ten to eighteen inches in diameter. The northeastern portion of section 26 is covered with spruce and tamarack from six to ten inches in diameter. The eastern half of section 13 is covered with spruce, tamarack, poplar and balsam averaging from twelve to sixteen inches in diameter. The remainder of the township is covered with spruce and tamarack, the greater part of which is under eight inches in diameter and has no great commercial value. There is no hay of any extent. All of the northwestern and northern part of the township is occupied by lake St. Martin, the water of which is fresh. The bottom of this lake is composed of limestone gravel. There are no inland lakes of any importance. Montague river is a fresh-water stream, about thirty-five to fifty feet in width and about twenty inches in depth. It flows across sections 12, 13, 14 and 23 into a bay of lake St. Martin in the northeastern part of section 23. This creek flows in a steady, even manner through level land with

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 6.—*Concluded.*

willows on either side. There are no other creeks or rivers in the township, and the only other water to be found is in the swamps and muskegs. There are no water-powers. According to the settlers living on the west side of lake St. Martin the climate is very agreeable and there are seldom any summer frosts. The timber of the township is the only fuel; it is fairly evenly distributed and will be sufficient for the settlers for a considerable time. There is a ridge of almost pure limestone in the southwestern part of section 4. There are no other stone-quarries of any importance. No minerals were seen. Moose and elk are occasionally shot by the Indians. Minks, foxes, weasels, muskrats, coyotes and rabbits are fairly plentiful. There is an abundance of partridges and prairie-chickens. Whitefish, jackfish and pickerel are caught in great quantities in lake St. Martin, and this forms the chief occupation of the settlers in winter.—*J. E. Jackson, D.L.S., 1912.*

RANGE 7.

This is a fractional township, consisting of a point of land known as Long
20. Point, running out into lake Manitoba; the area of the dry land is 158 acres. There is a small supply of timber, consisting of spruce, ash, elm and poplar. The soil is of good quality.—*W. Wagner, D.L.S., 1873.*

(*East outline.*)—The country traversed by this line has a rolling surface
21. timbered with poplar. Numerous marshes are met with in which there are reeds, rushes, willows and, occasionally, small ponds. The soil is all of first-class quality. The land in the marshes is rated as third-class, although the soil may be of much better quality.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—There is some fine meadow land in this township along the shores of lake Manitoba. Back from the lake it is thickly timbered with poplar, averaging seven inches in diameter, and suitable for building and fencing purposes.—*W. Wagner, D.L.S., 1885.*

Along the shore of lake Manitoba there are many meadows, the hay in which is usually cut by the settlers in the district. The country back from the lake is thickly timbered with poplar of an average diameter of about seven inches, and is suitable for building and fencing.—*N. R. Freeman, D.L.S., 1888.*

This township is now almost entirely settled and the homesteaders are making slow progress in clearing off the heavy timber. Mixed farming and winter fishing are the occupations of the settlers.—*G. A. Bennett, D.L.S., 1912.*

(*East outline.*)—The country along this line has, generally, a level surface
22. with a number of hay marshes and muskegs. It is timbered with poplar and a few scattered spruce. The timbered land has a first-class soil.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—This township is chiefly wooded with poplar, averaging seven inches in diameter. There are numerous hay meadows. There is a lake in the southeasterly part of the township with an area of about four square miles. The land generally is of good quality.—*N. R. Freeman, D.L.S., 1888.*

This township is well suited for mixed farming and dairying, the soil being a rich black loam with clay subsoil. The surface of the country is gently rolling, and is well timbered with poplar, some of good size, on the ridges, and interspersed with hay meadows in the depressions. This alternation, extending as it does through the township, gives plenty of building material and fuel and good feed for stock. Game was fairly plentiful, and some of the settlers take a good many fish from lake Manitoba.—*G. A. Grover, D.L.S., 1906.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

We were able to get into the south part of this township by settlers' trails and those of the Indians from Scotch Bay, but none of these were in good condition, and to get farther north I was forced to make a trail for myself. The whole country is gently rolling, wooded with poplar and some spruce on the ridges and having hay meadows or sloughs in the depressions. To the north the country had been more burned in places and was slightly more rolling though by no means hilly. Game was abundant. No minerals of economic value were seen, nor is there any water-power in the township. Though many of the quarter-sections are taken up, only a few were occupied at the time of survey (August) as nearly everyone was waiting till the township would be subdivided. This township has long formed a hunting ground for the Indians of the adjacent reserve and many of their old camps were seen. An old telegraph line runs diagonally across the township from the northwest to southeast. I think the township will make an excellent mixed-farming country.—*G. A. Grover, D.L.S., 1906.*

(*East outline.*)—The country along this line is timbered with poplar, oak, **23.** birch, a few spruce and cottonwood. There are a number of marshes and muskegs; the former in some cases have an abundant supply of hay and in others are covered with a growth of willows. The soil is of second-class quality.—*J. Doupe, D.L.S., 1875.*

(*Subivision.*)—The west half of this township is about one-half swamp and muskeg, with a strip of good high land running through it. This strip is mostly covered with poplar of about three inches in diameter, and there are a few traces of the heavy timber that covered it at one time. Sections 4 and 5 are open *brulé* with small poplar and willow scrub.—*J. E. Woods, D.L.S., 1898.*

This township was reached from Oak Point, a station on the Canadian Northern railway, by the trail along the northeast shore of lake Manitoba as far as Minnewakan; thence by the old "Indian trail" to section 9 of the township to the south. Both of these trails were in good condition. From this point the course is northeasterly by an old hunting trail to the northeast corner of section 16, and thence by my own trail through sections 22, 23, 26 and 35 nto the southeast quarter of section 2, township 23, range 7, and thence northerly through the township. The soil is chiefly black loam of a depth of from six to ten inches on a clay sub-soil, and is well adapted to agricultural purposes. The presence of a large number of hay marshes, in which the hay is a coarse grass of fair quality, makes this a mixed farming country. The surface is everywhere covered with bush, except where the high ground is cut by numerous narrow hay marshes and muskegs, which abound in the township. The timber is chiefly black and white poplar from six to twelve inches in diameter with scattered spruce from six to twelve inches in diameter and a few scrubby oak. The marshes and muskegs are immediately surrounded by willow. Fresh water is everywhere obtainable by digging a few feet, and was to be had in all the marshes and muskegs at the time of the survey (August). A few small streams of fresh water flow westward towards Dog lake and frequently lose themselves in the large marshes. The land is not liable to be flooded. No water-power is available. The climate is moderate, with no frosts at the time of the survey. Fuel is everywhere to be found. At the northeast corners of sections 2 and 12, limestone was encountered in the pits six inches below the surface, apparently in place, and it was found impossible to penetrate it with pick and shovel. There are no minerals. The game consists of moose, elks, geese and ducks.—*J. L. R. Parsons, D.L.S., 1906.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

(*North and east outlines.*)—The country along these lines is nearly all covered
24. with poplar bush, with an occasional hay marsh. There are a few scattered spruce throughout and a number of muskegs in sections 31 and 35. Along the northern boundary the land is of second-class quality, while along the eastern it is of first-class quality.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—This township was reached from township 23, range 7, by my own trail past the northeast corner of section 35, township 23, range 7; thence northwesterly across sections 2 and 11, to the northeast corner of section 10; thence northerly along the east boundary of section 15; thence northwesterly into section 22. This trail is in fair condition. The soil is chiefly black loam of an average depth of eight inches on clay subsoil and is intermixed with numerous large stones and boulders in many places. The ridges are broken by many marshes, muskegs and hay marshes. The country is best adapted to mixed farming. The surface is partly timbered and partly scrubby and it has been swept by at least two fires since the original survey. The only large timber left, which is black and white poplar from six to twelve inches in diameter, occurs on the east half of sections 3 and 10, and in sections 4 and 9. The balance of the township is covered with poplar two to six inches in diameter, willow and small scattered groves of spruce three to eight inches in diameter. There is only a small amount of good marsh hay in the township. The numerous marshes and muskegs were very wet at the time of the survey (September), and contain a coarse, sour variety of wire grass which my horses would not eat. The upland grazing is, however, good, there being a heavy growth of peavine almost everywhere on the ridges. An abundance of fresh water is everywhere available in the marshes and muskegs. No streams occur. Fire-killed standing trees and windfall afford excellent fuel throughout the township. There were no stone-quarries nor minerals found. The game consists of moose, elks and duck.—*J. L. R. Parsons, D.L.S., 1906.*

(*North outline.*)—Section 36 is covered with poplar and pine of fair quality.
25. The remaining sections are timbered with poplar, of which a considerable portion has been killed by fire. The surface is nearly level, and appears to have a very good soil.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township can be reached by a trail from Oak Point, or by boat from either Oak Point or Westbourne, to Silver Bay post office in township 26, range 8. From here we opened up a trail over the northerly part of township 25, range 8, entering this township in section 31. There is considerable good farming land in this township but parts are broken by sloughs. The soil is a black loam with a good clay subsoil in most parts. The land is covered with scrub and a few small scattered clumps of spruce that have escaped the fire when the rest of the township was burned. There are no large areas of timber and what there is would be suitable for building purposes. There is very little hay as the grass of most of the sloughs is not suitable for hay. There are no permanent bodies of water, but good water can be obtained by digging around any of the sloughs. There are no streams nor available water-powers. Hard frost appeared on August 18. There is plenty of dry poplar and spruce for fuel but no lignite veins were found. There are no stone-quarries but limestone comes to the surface in section 14. No minerals of economic value were seen. Moose, elk, deer and bears are plentiful. There are some prairie-chickens and partridges. A few prairie and timber wolves are found.—*C. M. Teasdale, D.L.S., 1903.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

(*East outline.*)—The surface of the eastern portion of the township is nearly
26. level with occasional hay marshes. The dry land is timbered with poplar, pine and spruce, the greatest part, however, has been damaged by fire. The soil is either sandy or clay loam, and is of good quality.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township can be reached by either trail or boat from Oak Point, or by boat from Westbourne, to Silver Bay post office in township 26, range 8. From this point we followed a trail through the north part of township 25, range 8, to this township. There is considerable good land suitable for farming in this township. The soil is a black loam with a clay subsoil except in the northeast part where the subsoil is more sandy or gravelly. The land is level or gently rolling and is covered with small poplar and willow scrub. There are a few clumps of spruce which have not been touched with fire which would supply good building logs. There is very little hay land. Very little permanent surface water appears, but good water can be obtained by digging a few feet near any of the sloughs. There are no streams nor available water-powers. Hard frost occurred on August 18 and 19. There is plenty of good dead spruce, poplar and jackpine for fuel, but there are no coal nor lignite veins. No stone-quarries nor minerals of economic value were found. Moose, elks, deer, bears, and wolves are plentiful. There are a few prairie-chickens and partridges.—*C. M. Teasdale, D.L.S., 1908.*

(*East outline.*)—Along this line the surface is nearly level. The soil is of
27. good quality. It is mostly covered with pine, spruce and poplar, the greater part of which has been killed by fires.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township may be reached by the mail trail or by boat from Oak Point to Silver Bay post office in township 26, range 8. From this point a trail runs in a northeasterly direction to this township. An old hunters' trail crosses the township entering in the north boundary of section 32 and leaving in section 12. The surface is slightly rolling, and the soil is principally a loam with a clay subsoil, and should be suitable for farming. The whole township is covered with scrub and a few scattered clumps of spruce and jackpine. There is very little timber but a few good building logs could be cut in most of the sections. There is no good hay in the township. Water is found in muskegs in almost any part of the township, and is of very good quality. There is no available water-power. The summer was very dry and hot. Frosts occurred early in June and after August 18. There was considerable small fruit which matured without damage by frosts. There is some dry, standing spruce almost all over the township which would make good fuel, but there are no coal nor lignite veins in the township. There are no stone-quarries but there is an outcrop of limestone in section 22 where there is a high ridge. There are no minerals of economic value. Moose, elks, and bears are plentiful. There are a few partridges and prairie-chickens.—*C. M. Teasdale, D.L.S., 1909.*

(*North outline.*)—Along this line the surface is nearly level and somewhat
28. broken by hay marshes. The soil is of good quality. Part of section 36 contains windfall and marsh; the remainder of the section, section 35 and about one-half of section 34 are timbered with pine, spruce and some good poplar. Going to the west of section 34 the timber is dead and mostly fallen.—*E. Bray, D.L.S., 1880.*

(*East outline.*)—The soil is of good quality. The surface is level and timbered with poplar, pine and spruce, which has been more or less damaged by fire. Near the northern boundary the timber has mostly fallen and a new growth of pine is springing up.—*E. Bray, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

(*Subdivision.*)—There is no trail leading into this township. The western outline is about one and one-half miles distant from Grahamdale, a station on the Canadian Northern railway, from which point a trail could be easily made. The soil is mostly a gravelly clay and would be suitable for light farming and for pasture. The surface is slightly rolling and covered mostly with light scrub and scattered clumps of young jackpine, with some tamarack and spruce from six to twelve inches in diameter in sections 7, 18, 19 and 30. The land in these sections is swampy. There is plenty of rough feed on the scrubby land, and a good deal of grass of inferior quality may be found in the marshy places, but there are no meadows having a large yield. There are no lakes nor running water in the township except a portion of a small lake in section 30, but there is no doubt that good water would be found by sinking wells. There are no water-powers and the land is not liable to be flooded. The climate is the usual summer and winter climate of Manitoba, and the land is within the zone suitable for general farming. There is no more liability to summer frost than is usual in uncultivated land. Timber suitable for fuel is very scarce. No stone, rock-in-place nor any indications of minerals were in evidence. Moose, elk and red deer are more or less plentiful; prairie-chickens and grouse are also plentiful.—*J. Gibbon, D.L.S., 1911.*

(*East outline.*)—The surface is level and somewhat broken by hay marshes, **29.** excepting in section 36, where a stony tract is entered. This boundary was formerly covered with good timber, but it is now nearly all dead and fallen.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township can be reached from Hilbre, a station on a branch line of the Canadian Northern railway running from Winnipeg to Gypsumville. From this point a trail leads to and around the southern end of lake St. Martin, and enters this township in section 7. At present this trail would present some difficulties in transportation, as it leads over some soft and marshy ground; the distance from the station is about ten miles. The soil is mostly a gravelly clay with some boulders in the higher and drier places; it can hardly be classed as first-class farming land, but it would be suitable for pasture or light farming as it can be easily cleared. The surface is slightly rolling and covered mostly with a light scrub and scattered clumps and belts of young jackpine with some tamarack and spruce. There is very little timber of any commercial value, what timber there is being mostly young jackpine up to six inches in diameter scattered throughout the township in small clumps or belts; there is some spruce and tamarack from six to twelve inches in diameter in sections 19, 29, 30, 31, 32 and 33. While there are some open marsh lands scattered throughout with a good deal of inferior grass, yet there are no meadows that could be properly designated as suitable for cutting hay. The available fresh water found is in three small lakes from five to ten feet in depth, in sections 15, 16 and 23, there being no running creeks, except a short one which drains into a lake in section 16, the drainage effected being a seepage from the higher to the lower level. No doubt a supply of good water could be obtained by sinking wells. The lands are not liable to be flooded and no water-powers are available. The climate is similar to that of Manitoba in general, and the land is within the zone suitable for general farming. There is no more liability of summer frosts than is usual in an uncultivated area. The most readily available fuel is small, green pine and tamarack. The pine can be procured in small quantities in almost any quarter-section. In the two western tiers of sections, tamarack and spruce up to twelve inches in diameter, and in the northern tier some dry and green pine from six to twelve inches in diameter, can be procured in limited quantities. No coal was seen. No stone nor rock-in-place, suitable for quarrying purposes, were in evidence. No mineral indications were discovered. Moose, elks, and red deer are more or less plentiful, also prairie-chickens and grouse.—*J. Gibbon, D.L.S., 1911.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

(*East outline.*)—This line passes through a country covered with standing
30. fire-killed pine and spruce. There is a small quantity of pine averaging seven inches in diameter untouched by fire in section 13. The surface is rolling. The soil is rather stony and may be classed as of third-class quality.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township may be reached from Fairford by boat along the Fairford river and across lake St. Martin, a distance of about eighteen miles. It may also be reached over land by an old wagon road around the south end of lake St. Martin to the northeast corner of section 33, township 29, range 7. We constructed a road from here in a westerly direction to the northeast quarter of section 12, township 30, range 8. Another road was cut eastwards across the southern part of section 3, and thence northeasterly across sections 2, 11 and 12. The above-mentioned roads are rough and cross several muskegs, but a team has no difficulty in getting over them with a small load. The soil in this township is mostly gravel and clay with a small depth of loam on the surface. At the south end of the eastern boundary there is a ridge of pure gravel. The northern end of this boundary as well as the northeastern part of the township is composed of gravel with ridges of limestone and granite rock. On account of it being so rocky and gravelly this portion is not on the whole adapted to agriculture. There are, however, several small areas of fairly good land. In the northwestern portion of the township there is a considerable area of spruce and tamarack swamp; the soil here is composed of decayed vegetable matter and is very wet. In the southern part there are several large muskegs. The remainder of the township is quite rocky and is covered with poplar scrub; there is very little of it suitable for agriculture. The greater portion of the township, with the exception of the northwestern part, is rolling and is covered with scrub with many patches of jackpine and poplar of fairly large size. The muskegs in the southwestern part are usually open with clumps of tamarack and spruce scrub. The southeastern portion has a number of clumps of jackpine of fairly good quality which could be made into ties, but the bulk of the high land in the eastern half of the township is covered with jackpine scrub and with scattered dead jackpine of about twelve inches in diameter. In the northwest the timber is spruce and tamarack but is mostly small, being about four to six inches in diameter. The southwest part is covered mostly with poplar, with small areas of spruce and tamarack up to seven inches in diameter. There are some small patches of good hay on the southern part of section 2. The northwestern portion of the township borders on lake St. Martin, the water of which is fresh. Along the western part of sections 18 and 19 the shore is high, and the land is not subject to overflow. The northwestern portions of sections 30 and 32 are swampy near the shore, but are sufficiently high to prevent much overflow from the lake. There are no lakes of any size in the township and no rivers exist. There are several small streams of fresh water flowing into lake St. Martin. The northeast portion of the township is very dry, there being not enough water for drinking purposes; in fact, the whole of the eastern part is very dry. There are no water-powers. In the autumn, after September 28, the climate was very agreeable. According to the people living on the west side of the lake, there are seldom summer frosts. There is no fuel other than the timber, which will provide a sufficient supply for some time. There is a considerable quantity of limestone rock in the southwestern part, and in the northeastern portion there are limestone ridges in nearly every section. This limestone is of first-class quality. There is more or less limestone in nearly all the high land, and in many sections it is only a few inches beneath the surface. No minerals were seen. Moose and elks are fairly plentiful and some tracks of bears were found. Minks, foxes, weasels, muskrats

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

and coyotes are fairly plentiful. There is an abundance of partridges, prairie-chickens and rabbits. Whitefish, jackfish and pickerel are plentiful in lake St. Martin.—*J. E. Jackson, D.L.S., 1912.*

(*East outline.*)—The soil along this line is poor. The southerly four miles **31.** are rocky, while the country to the north is swampy. Sections 25 and 36 are timbered with small spruce and tamarack. There is some pine in sections 1 and 12. In the other sections the timber is dead.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township may be reached from Fairford, a station on the Canadian Northern railway, by boat along the Fairford river and across lake St. Martin. It may also be reached by an old wagon road around the south end of the lake to the northeast quarter of section 33, township 29, range 7, thence easterly and northeasterly to section 12, township 30, range 7, thence northeasterly and northerly across township 30, range 6, to the southern portion of section 4, township 31, range 6, and thence westerly to this township. The surface of sections 1 and 3, the southern halves of sections 10, 11 and 12 and a portion of section 2 is mostly rolling land with a soil consisting of about two inches of sandy or gravelly loam with a gravel subsoil. The greater part of this area is quite rocky, but not so much but that it could be easily cleared and would make fairly good farm land. The remainder of the township is nearly all spruce and tamarack swamp and is very wet. In its present state it is far too wet to be of any use as farm land. Most of the timber in this township is small and unimportant, very little of it exceeding ten inches in diameter. About one-half of sections 35 and 36 is covered with spruce and poplar from ten to sixteen inches in diameter. The high land, comprising sections 1 and 3 and the south halves of sections 10, 11 and 12, is covered with jackpine and poplar of about six inches in diameter. Most of the remainder of the township is covered with spruce and tamarack from five to eight inches in diameter, with a number of small sloughs, most of which are covered with willow or tamarack scrub. There is a small area of good land in the eastern part of section 33 and the western part of section 34. There is no other hay of any extent. All of the western part of the township is covered by lake St. Martin, which is a fresh-water lake with a limestone gravel bottom. There is a small lake with an area of about sixty-seven acres in the eastern part of section 9 and the western part of section 10. This lake is surrounded by swamps and muskeg. The water is a brownish colour, owing to the vegetable matter contained in it. There are no other inland lakes or rivers in the township, and the only other water to be found is in the swamps and muskegs. There are no water-powers. According to the settlers living on the west side of lake St. Martin the climate is very agreeable and there are seldom any summer frosts. The timber of the township furnishes the only fuel. This is fairly evenly distributed and will be sufficient for the settlers for a considerable time. The eastern part of section 1 contains some very good limestone rock. There are no stone-quarries of any importance. No minerals were seen. Moose and elks are occasionally found. Minks, foxes, weasels, muskrats, coyotes and rabbits are fairly plentiful. Partridges and prairie-chickens are very plentiful in all parts of the township. Whitefish, jackfish and pickerel are caught in great quantities in lake St. Martin.—*J. E. Jackson, D.L.S., 1912.*

(*North outline.*)—Along the northerly boundary the land is nearly level, with **32.** a good soil, covered with poplar, spruce and tamarack, often of good size and quality, though in some sections damaged by fire.

(*East outline.*)—The south three-fourths of section 1 is swampy and covered with small spruce and tamarack. North of this there is a strip of good land of about fifty

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 7—*Continued.*

chains in width. This land is covered with good spruce, tamarack, poplar and birch. A hay marsh is found along the shore of lake St. Martin. On the point of land extending into the lake in section 25 there is also an extensive hay marsh.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township is reached by the mail road east of lake Manitoba or by steamer crossing the lake. It is divided by I. R. No. 49 and the narrows of lake St. Martin. That part north of the lake is gently undulating land gradually becoming level to the east. Sections 27 to 34 are as a rule wooded with poplar with scattered areas of spruce and some swamps and muskegs. The timber is rarely of large size, the best being in the limits of the Indian reserve. The soil is as a rule a fair clay and if drained (a comparatively easy matter), would be a good arable land. Sections 25, 26, 35 and 36, occupy a ragged point projecting east into lake St. Martin. This is almost bare of timber and is hay land and marsh, very flat and low, and of no value for anything but grazing or hay. Sections 1, 2, 3, 10, 11 and 12, an island in section 5 and another in section 14, lie south of lake St. Martin. This also is gently undulating, covered mostly by poplar woods with patches of spruce and some swamps and muskegs. Here and there some good spruce or tamarack of fair and even large size is to be found, but this is the remnant of the original timber growth which was killed by fire and is now replaced by poplar of little value. A strip of marsh and hay meadow borders the lake in sections 10, 11 and 12. The soil is clay of fair quality and somewhat wet for want of drainage. Plenty of good fresh water is to be obtained by digging but there are no streams of any size. The marshes are flooded by the lake but this is generally in the winter when the lake is backed up by the freezing up of the outlet. There are no water-powers. The climate seems to be fair and summer frosts are not common. A few potatoes are grown on the Indian reserve. The fuel consists of poplar and spruce covering the township. No lignite beds, stone-quarries nor minerals were encountered or heard of. Game consists of ruffed and dark grouse, buck hares, and in summer, water-fowl. The island in section 5 is known as Sugar island as it is covered by a growth of small maples.—*L. R. Ord, D.L.S., 1908.*

RANGE 8.

This is a fractional township containing about 800 acres of dry land, part of
17. which is timbered with poplar and oak, and the balance is hay land. A large marsh borders the township along the lake shore.—*C. P. Brown, D.L.S., 1873.*
 This is only a small fractional township consisting of parts of two sections, both of which are occupied by settlers. The land is of good quality, with occasional bluffs of poplar intermixed with birch.—*N. R. Freeman, D.L.S., 1888.*

About two-thirds of the township is covered with poplar, averaging six inches
22. in diameter, and suitable for building purposes; the other third is meadow and muskeg. During the summer of 1888 the meadows were covered with from three to ten inches of water. The soil on the dry portion of the township is of good quality.—*N. R. Freeman, D.L.S., 1888.*

I think most of the marshes in this township will in time dry up, if not altogether, at least to a considerable extent. At present they are difficult to survey owing to the lack of well defined shores. The township has good soil. The surface is rolling and is covered in the northern part by poplar bush with considerable spruce in some places. Near the Indian reserve the country is much broken by immense hay meadows and marshes and on the higher places only scrub is growing, brulé and deadfall showing the work of fires. Settlers seem to be coming into this country rapidly.—*G. A. Grover, D.L.S., 1906.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 8—*Continued.*

This township is being settled but the homesteaders are making little progress in clearing off the forest. The many hay marshes enable the settlers to do some ranching, and lake Manitoba affords them profitable winter fishing.—*G. A. Bennett, D.L.S., 1912.*

This township consists of about sixteen sections of land, the rest being occupied by Dog lake. The shores of the lake are low and swampy, but the interior is good high land, covered with willow and poplar scrub. On the east side of the township there are a few belts of second-growth poplar from two to four inches in diameter, while on the west there is considerable *brulé* and windfalls of large poplar. The timber along the southern boundary is green and of considerable size. The soil is a black loam about eight inches deep with a clay subsoil containing limestone. Considerable hay may be cut during a dry season.—*J. E. Woods, D.L.S., 1898.*

(*North outline.*)—The country along this line is timbered generally with poplar, scattered oak and birch. There is a good deal of oak on all the points running out into Dog lake. The immediate shores of the lake in many places are low and covered with reeds and rushes. The land is of first- and second-class quality.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—There are only about eleven sections of land in this township as the rest of it is occupied by Dog lake, along the shore of which is a marsh from ten to thirty chains wide. From the marsh the land rises gently to the north and is generally dry and covered with *brulé* and large poplar windfall mixed with willow and poplar scrub. Along the marshes that border the lake frequent fires have destroyed the windfalls, and there remains only scrub, a few clumps of spruce and some groves of large poplar, but ridges of good oak supply sufficient timber for all the requirements of the settlers. The soil is a black loam six to ten inches deep with a clay subsoil. Several sections have sufficient open land for immediate settlement, and large areas could be prepared for cultivation with little labour.—*J. E. Woods, D.L.S., 1898.*

The mail route running from Oak Point to Fairford enters this township in section 30 and leaves in section 32. This trail is very bad in wet weather.

A line of boats running from Westbourne call at The Narrows which is on the main trail in township 24, range 10. The soil is a black loam of from four to eight inches with a clay subsoil in most parts. The rock is only about one foot from the surface at the northeast corner of section 11. This township is best suited for mixed farming and stock-raising, as it is mostly badly broken up by sloughs. The surface is level and covered with poplar and willow scrub and considerable areas of fair-sized poplar. There is some oak on the points of land around Dog lake and some clumps of spruce suitable for building purposes to the east of Moosehorn lakes. In dry years large quantities of hay could be cut to the north of Dog lake and around Moosehorn lakes. The water is all fresh, and springs are quite common where the spruce is found. Moosehorn creek is very sluggish and in places is entirely lost in the marsh. Large areas of land were flooded to the north of Dog lake during the summer and fall, there being as much as two feet of water at some places along the base line. There is no available water-power. The climate is very good. The summer is very free from frosts. Dry wood is plentiful as several areas have been burned recently, and the dead trees are still standing. No coal nor lignite has been found. There are no known mineral deposits and no stone-quarries were noted. Moose, elks and deer are plentiful. There are a few prairie-chickens and grouse. Ducks are plentiful during

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 8—*Continued.*

the summer and fall. Lake Manitoba and Dog lake are well supplied with whitefish, pickerel and pike. The smaller lakes are stocked chiefly with pike.—*C. M. Teasdale, D.L.S., 1907.*

A trail running from Oak Point, a station on the Canadian Northern railway, to Fairford enters this township in section 5, and leaves in section 31. **26.** There is also a line of steamers which run from Westbourne, a station on the Canadian Pacific railway, calling at The Narrows which is on the main trail. The trail is very bad in wet weather. The soil consists of from four to eight inches of loam with a clay subsoil in most parts. This township is well adapted to mixed farming and stock-raising as it is much broken by sloughs. The surface throughout is level and generally covered with small poplar and willow scrub, but there are some good-sized poplar scattered through it. There are some clumps of spruce and poplar in the eastern part of the township which will furnish good building timber. Large quantities of good hay are found around the lakes and sloughs. The water is all fresh. There are two very sluggish creeks, the country being very level. The land along the lake-front often floods during stormy weather. There is no available water-power. The summers are free from frosts. Wood is the only fuel as there are no coal nor lignite deposits. No stone-quarries nor minerals of economic value are known to exist. Moose, elks and deer are found in large numbers. There are a few prairie-chickens and grouse. Ducks are very plentiful during the fall. There are a few timber wolves. Foxes and prairie-wolves are quite numerous. Whitefish, pickerel and pike are found in lake Manitoba. The inland lakes are all well stocked with pike.—*C. M. Teasdale, D.L.S., 1907.*

This township can be reached by trail from Oak Point, or by boat from either **27.** Oak Point or Westbourne, to Silver Bay post office in the township to the south. From there a trail runs northeasterly, entering this township in section 10. The land is a good loam with a clay subsoil and should make good land for mixed farming. The surface is gently rolling and is covered with poplar and willow scrub, and scattered spruce and poplar. No large areas of timber occur, but some good logs for building purposes could be found throughout the township. There is an abundance of wood for fuel. Hay of good quality is found in most of the sloughs in this township. There is an abundant supply of water near the lakes but the smaller sloughs will dry up in a dry season. Considerable land around the lakes traversed will be flooded in high water. There are no streams for water-power development. No stone-quarries nor minerals of economic value are known to exist. Moose, elks, deer, ducks and partridges are very plentiful. Jackfish and pickerel are abundant in all the lakes.—*C. M. Teasdale, D.L.S., 1909.*

(*North outline.*)—Along this line the land is generally level and somewhat **28.** broken by numerous hay marshes. Some dead and fallen timber is found in section 33, but the remainder is well timbered with poplar, spruce and tamarack. The soil is of good quality.—*E. Bray, D.L.S., 1888.*

(*North and east outlines.*)—The north boundary of this township runs mostly through burned timber, much of which is still standing. Sections 31, 32 and 33 are much broken by sloughs. The remaining sections are generally more rolling. The east half of section 36 is high and rocky in many places. The east boundary of the township runs through some good land but it is mostly badly broken by sloughs and muskegs. Most of the timber in the township has been fire-killed or burned.—*C. M. Teasdale, D.L.S., 1909.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 8—*Continued.*

(*Subdivision.*)—This township is easy of access, being on the branch of the Canadian Northern railway running from Winnipeg to Gypsumville. This railway enters the township in section 2 and passes through sections 2, 11, 10, 15, 22, 21, 28, 33 and 32. A station called Grahamdale is situated in the southeastern quarter of section 15. The soil outside of the marsh land, is mostly a first-class heavy clay loam with a few stony ridges, also a good clay or sandy loam soil, and would be suitable for mixed farming, as there is ample feed and water for a limited amount of stock in the marsh lands. The surface is slightly undulating and covered with a growth of timber and scrub, with the exception of the marsh lands which have grass, willow and open water in places. The standing timber is principally cottonwood and poplar with some clumps of green spruce and tamarack up to twenty inches in diameter. Patches of dead spruce and tamarack windfall are found scattered throughout the township. While there is plenty of rough feed in the form of grass, yet there are little or no hay lands that can be designated as such. There is plenty of good fresh surface water for stock in the marshes and several lakes as well as a few small running creeks. Birch lake, a fine body of fresh water from seven to fifteen feet deep, about one and a half miles long and one mile wide, occupies a portion of sections 20, 21, 28 and 29. There are also several smaller lakes in sections 16, 17, 8 and 5 which are all drained through Birch lake by Birch creek, a stream from six to ten feet wide and from three to five feet deep flowing through sections 29, 32 and 33 into lake St. Martin, a large body of fresh water about two miles to the north of section 34. There are also several small running creeks in sections 34, 27, 26, 21 and 22 from one to four feet wide and from six inches to one foot deep. There is not much danger of lands being flooded other than the raising of water-level in the low lands and marshes during a rainy season or heavy local showers. There are no falls nor rapids from which water-power could be developed. The usual Manitoba climate is found here with no more summer frosts than are usual in an uncultivated area. Cottonwood, poplar and dry spruce are the most readily available timbers for fuel and they can be procured in sufficient quantities for domestic purposes in almost every quarter-section in the township; there are also numerous clumps of green spruce and tamarack suitable for building purposes, the northern half of the township being the most heavily wooded. No indications of coal or lignite veins were discovered. While some portions of the township have stone and gravel formations, yet no stone-quarries, rock-in-place, nor minerals were in evidence or at all likely to be from surface indications. Moose, elks and small red deer are more or less plentiful at times; prairie-chickens, grouse and ducks are numerous; while the group of lakes in the western half of the township is the home of many muskrats and minks. Taking the township as a whole the lands will eventually become valuable on account of their suitability for mixed farming and close proximity to Winnipeg market, railway transportation and the great water areas of lakes Winnipeg and Manitoba.—*J. Gibbon, D.L.S., 1911.*

(*East outline.*)—Along this line the land is good with a sandy loam soil. It
29. is timbered with spruce, pine, poplar and tamarack of fair size, but mostly damaged by fire.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township is easy of access, as the Canadian Northern railway passes through sections 5, 7, 8 and 18. A station, called Hilbre, is situated in section 24 of the township to the west. The soil is mostly a heavy clay loam over a clay subsoil with some gravel and stone in the eastern tier of sections, and would be suitable for general farming when cleared. The surface is slightly rolling and covered with a growth of timber and scrub with a few scattered grassy marshes. Lake St. Martin, a large fresh-water lake, projects into this township from the north, covering five miles of the northern outline, sections 31 to 35, and extends southerly V-shaped to

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 8—*Continued.*

the northern boundary of section 10. The timber is mostly dry spruce with patches of green cottonwood and spruce from six to eighteen inches in diameter in the southern portion, the southern and western halves being the most heavily wooded and would supply a large quantity of timber suitable for fuel. There are no hay lands of any account. Hay has been cut on an area of about twenty acres in extent in the north-eastern quarter of section 36, and bordering on the lake and marshes there is a good deal of grass but of too poor a quality to be valuable for hay. A small running stream, called Birch creek, flows in from the south through sections 4, 9 and 10, entering lake St. Martin near the southern boundary of section 15. This creek is from two to three feet deep and from four to ten feet wide with a current of about one mile per hour. No land is liable to be flooded and there are no water-powers. The climate is similar to that of Manitoba in general, with no more summer frosts than are usual in an uncultivated area. Dry spruce and cottonwood are the most available fuel with some scattered patches of green timber and can be procured in sufficient quantity for domestic purposes in nearly every section, the southern and western portions being the most thickly and heavily wooded. No coal nor lignite veins were discovered. There is a rock exposure in the northwestern quarter of section 36 about a quarter of a mile east from the shore of lake St. Martin which might be suitable for building purposes. No minerals nor any indications of such were in evidence. Moose, elks and red deer are more or less plentiful, as well as prairie-chickens and grouse. Lake St. Martin is a great fishing ground for whitefish, pike, pickerel and other fresh-water fish. Taking it as a whole, this township will eventually become valuable for settlement purposes.—*J. Gibbon, D.L.S., 1911.*

30. (*East outline.*)—The land generally is of fair quality, and is heavily timbered with spruce, pine, tamarack and poplar.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—This township, being situated on the east shore of lake St. Martin, is easily approached from Fairford by boat along the Fairford river and across lake St. Martin, a distance of about eighteen miles. There is an old wagon road around the south end of Lake St. Martin to the northeast quarter of section 33, township 29, range 7, thence across township 30, range 7, to the northeast quarter of section 12 of this township. By this road the distance is about thirty miles from Fairford and is by no means a first-class road as there are several sloughs and muskegs to cross. As there was no road along the greater portion of the way it was necessary to do considerable cutting and clearing but now most of it is quite passable. The greater part of this township is swampy country with willow and poplar scrub and in some places alder and other small bushes, and will be of little value till it is drained. The soil is muck to a depth of about six inches with a subsoil of white clay. The southwestern part is higher and dry for the most part. The soil in this part is mostly gravel and not of much value for agriculture. The surface of this township is low and flat, an exception being the southwestern part of section 1 which is slightly rolling. There is no timber of any great extent. Very little hay was seen. Lake St. Martin contains fresh water. There is no other body of water of any importance. The shore is protected by a ridge of gravel and boulders so that the land is not liable to be flooded. There are no water-powers. The autumn after the 28th of September was very agreeable. According to the people living on the west side of the lake there are seldom any summer frosts. There is very little fuel. No stone-quarries nor minerals exist. Moose and elks are fairly plentiful, and rabbits, partridges and prairie-chickens are found in abundance. No signs of any other game were seen.—*J. E. Jackson, D.L.S., 1912.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 8—*Continued*.

(*Ranges 8 and 9.*)—These townships are easily accessible by wagon from St.

31. Martin or Fairford, both being on the Winnipeg-Gypsumville branch of the Canadian Northern railway. However, in going from the latter town the Fairford river has to be crossed by ferry. The soil is of a rich nature averaging five inches of black loam with a clay loam subsoil, and will be suitable for raising excellent grain crops and general farming when cleared of the standing wood and timber. The land is covered with poplar from two to ten inches in diameter, and there are many scattered open hay sloughs. Fresh water is easily obtained by digging ten to twenty feet, and the many small sloughs, together with lake St. Martin in the immediate vicinity, afford watering places for stock. There is wild slough hay in great abundance. No water-powers nor minerals were noted in these townships or in the vicinity. There is an abundance of soft wood for fuel. The Gypsumville quarries are distant about ten miles northwest. Only small game, such as partridges, prairie-chickens, rabbits and muskrats, is found.—*A. G. Stuart, D.L.S., 1912.*

This township is reached by the trail along the north side of lake St. Martin. The soil is a fair quality of clay and is good for cultivation. The timber is mostly poplar with an occasional spruce, none of which are of large size. There are a few hay meadows and a narrow tract of hay land along the lake. The water is fresh with a little alkali, but there are no streams nor water-powers, and the land is never flooded. The climate is fair; summer frosts are not noticeable. The fuel is composed of poplar and spruce, and no coal beds are known. No stone-quarries nor minerals were found. Game is scarce.—*L. R. Ord, D.L.S., 1908.*

(*East outline.*)—Along the eastern boundary the surface is nearly level, and, excepting in the marshes, the soil is good. Nearly all the timber has been killed by fire.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—The soil of this township consists of a layer of leaf mould seldom exceeding nine inches in depth, with a grey clay subsoil containing some large stones. In places it should grow good crops. The surface, with the exception of the swamps, is rolling. The timber consists of poplar, tamarack, and spruce up to twelve inches in diameter. Where the tamarack grows there are many springs, and the water is of good quality. In places it is impregnated with gypsum. A few granite boulders are scattered throughout the township. Gypsum is found in sections 31, 34 and 35.—*R. Bourne, D.L.S., 1903.*

This township is reached by trail from Gypsumville or Fairford, along the north-west shore of lake St. Martin. The surface is gently undulating, low ridges running approximately north and south with intervening shallow muskegs and hay meadows. The land has a gentle fall to the south, which, though not very great, will be sufficient for drainage, and at some future date when thoroughly ditched much of the surface now too wet for anything but hay meadow and grazing will become available for cultivation. Probably one-fifth of the surface is now hay meadow. The remainder is covered with a growth of poplar of varying size, with some spruce and tamarack in the muskeg. Almost all the original timber growth seems to have been killed by fire about twenty-five years ago and only a few small clumps and patches remain, the present growth being fit only for small buildings, fences and fuel. There are no streams nor water-powers but water lies close to the surface; in fact in very wet seasons the lack of drainage makes the swamps very wet. This surface water is good and fresh, but that obtained from wells appears to be impregnated with magnesia and is avoided by cattle. Summer frosts are not noticeable. No coal, lignite, minerals nor stone were noted. Game is scarce, consisting of a few grouse and hares.—*L. R. Ord, D.L.S., 1908.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 9.

The soil in this township, although shallow, is of good quality, especially

- 17.** along the shore of lake Manitoba, where there is some excellent hay land.

First-class poplar is found in considerable quantities along the southern and western boundaries. The greater part of the rest of the township is covered with dead poplar interwoven with willow brush, together with occasional bluffs of green poplar. In the western part of the township there are a number of very bad muskegs.—*C. P. Brown, D.L.S., 1873.*

- 18.** The general character of this township is similar to that of township 17, range 9.—*U. P. Brown, D.L.S., 1873.*

- 19.** The general character of this township is similar to that of township 17, range 9.—*U. P. Brown, D.L.S., 1873.*

This township lies on the west shore of lake Manitoba, and has a good slope to the lake, though much of it is very wet from the flow of water coming from the west. Most of the township is timbered with small poplar and willow, though there is some poplar eight to ten inches in diameter in sections 4 and 5, and some scattered poplar and a few spruce in the northern portion. The soil is generally a black loam six to eight inches in depth on clay subsoil. An old cart trail to Manitoba House runs near the shore of the lake, but most of it was under water all summer owing to the high water and from the same cause most of the settlers along the shore have been compelled to abandon their homes. There are some good hay meadows scattered through the township, but no hay could be cut near the lake shore this year owing to high water.—*W. A. Ducker, D.L.S., 1902.*

- 20.** The general character of this township is similar to that of township 17, range 9.—*U. P. Brown, D.L.S., 1873.*

That portion of this township not taken up by an Indian reserve, or lying in

22. lake Manitoba, is beautifully and advantageously situated, and should be a most desirable place for settlement. There is an abundant supply of fish in the lake, and moose and elks are very plentiful in the surrounding forests. The township is slightly undulating and well wooded with poplar of a sufficient size for building and fencing. The soil is a rich clay loam, easily worked either in wet or dry seasons. There is a considerable quantity of hay land in the prairie-like glades about the lake.—*J. H. Brownlee, D.L.S., 1888.*

Lake Manitoba covers more than half of this township; the shores of the lake are low and consequently very often flooded. The soil is a good loam with a clay subsoil, and sections 17 and 18 afford very fair hay lands. This district has quite recently been over-run by fire, and consequently there is not much timber of any value.—*A. F. Martin, D.L.S., 1894.*

(*East outline.*)—Along the shores of Dog lake, the land is low, with reeds

23. and rushes. A few chains back it rises, and is mostly timbered with poplar, balm of Gilead and oak, with a few scattered spruce. The soil is a rich black loam of first-class quality.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—Dog lake occupies about one-half of this township. The water in this lake is very shallow and somewhat alkaline. McRae lake, a body of good pure water, occupies nearly the whole of section 17 and about half of sections 8 and 9. The land generally is flat and swampy, and the soil, with the exception of that in the immediate vicinity of the lakes, is very gravelly. The southern part of this township was

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 9—*Continued.*

very well wooded with poplar, but fire has swept this district and rendered the timber practically useless. Pasturage is abundant and of the richest quality.—*A. F. Martin, D.L.S., 1894.*

(*North and east outlines.*)—The land along these lines is generally timbered
24. with poplar, a few oak and birch. On the points of land running out into lake Manitoba and Dog lake there is considerable quantity of oak timber. There is some very rich land in this township, although it is generally of second-class quality.—*J. Doupe, D.L.S., 1875.*

(*Subdivision.*)—This township is very much broken by lakes, the principal ones being lake Manitoba, Nina lake and Dog lake in the southeast corner. Nina and Dog lakes are very shallow with low flat banks which are very often flooded, but in a dry season good hay may be cut along the shores. The land generally is low with many sloughs, and is covered with a luxuriant growth of grass which affords very good feed for stock. There is a very bad muskeg in the eastern tiers of sections which is almost impassable during the summer. The township is well wooded with poplar and oak, although a good deal of timber has been killed by fire.—*A. F. Martin, D.L.S., 1894.*

This township may be reached by a trail running from Oak Point to Fair-
25. ford which enters the township in section 3 and leaves in section 25, or by taking the steamers from Westbourne to The Narrows in township 24, range 10, and from there by a trail which is very bad in wet weather. The soil is chiefly a shallow loam with a gravel or clay subsoil. In the south part of sections 2 and 3 the rock comes close to the surface. It is best adapted to mixed farming. The surface is level and is covered with small poplar and willow scrub in most parts, as the timber has been destroyed by fire. There is some good-sized poplar in section 3 and spruce and poplar suitable for building purposes in sections 1, 12 and 13. There is considerable hay along lake Manitoba, but little could be cut around the sloughs without draining. The water is all fresh and is plentiful except in very dry seasons. There are no streams. All the hay lands along lake Manitoba are liable to be flooded owing to the rise caused by the wind and storms. There is no available water-power. Settlers report a moderate climate, fairly free from summer frosts. Vegetables and corn are grown. Wood is exclusively used for fuel, and no coal nor lignite veins are known. There are no stone-quarries, and no minerals of economic value are known to exist. Moose, elks and deer are found in the eastern part of the township. There are some prairie-chickens, and grouse and ducks are plentiful. Whitefish, pickerel and pike are abundant in lake Manitoba.—*C. M. Teasdale, D.L.S., 1907.*

There is a trail running from Oak Point to Fairford which enters the town-
26. ship in section 36 and leaves in section 34. A line of steamers running from Westbourne can at The Narrows in township 24, range 10. The trail is very bad in wet weather. The soil is a black loam with a clay subsoil. It is best suited for mixed farming as most of the quarter-sections are broken by sloughs. The surface is level and to the east of Elm creek is covered with willow, poplar and small birch. To the west of Elm creek it is covered with heavy bush of poplar, birch and scattered spruce of good size. Considerable hay could be cut around the marshes which run back from the shores of lake Manitoba. Water would not be plentiful in dry years back from the lake as the sloughs are mostly shallow and there are no streams. The water in lake Manitoba is fresh. The marshes and hay lands along lake Manitoba are liable to be flooded during storms, as the shore is only a few feet above the usual level of the lake. The summers as a rule are free from frosts. Wood is the only fuel as there are no known deposits of coal or lignite. No stone-quarries nor minerals

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 9—*Continued.*

of economic value are known to exist. Moose, elks, and deer are plentiful. There are a few partridges, prairie-chickens and grouse. Ducks are plentiful in the autumn. Whitefish, pike and pickerel are very plentiful in lake Manitoba. Elm creek, which is a very deep bay running back from the lake, is a good harbour, being sheltered, and having as great a depth of water as lake Manitoba.—*C. M. Teasdale, D.L.S. 1907.*

The trail from Oak Point to Fairford enters the township in section 10 and
27. crosses in an northwesterly direction, leaving the township in section 32. The trail is very bad during the spring and during wet seasons. The township may also be reached by sail-boat from Oak Point or by taking the steamer from Westbourne to The Narrows; and then a sail-boat from there to Elm Creek bay which enters the township in sections 10 and 15. The soil is a good black loam with a clay subsoil and is well adapted to mixed farming. The surface is level or gently rolling and except for sections 15, 16, 17 and 18 is principally covered with poplar or willow scrub with small scattered bluffs of spruce and poplar. Sections 15, 16, 17 and 18 are covered with heavy poplar bush with a few scattered spruce and birch. Sections 15, 16, 17 and 18 are the only parts of this township which have not been burned over and would supply good building logs and fuel for settlers for a considerable time. There is practically no hay land in the west half of the township, but considerable hay of good quality could be cut in the east half around the sloughs and Elm creek. There is good pasture as the ridges have considerable pea-vine on them. There is very little surface water in the west half of the township, but there are some deep ponds in the muskegs and sloughs in the east half. The water does not show any alkali. Elm creek, a bay from lake Manitoba, runs about three-quarters of a mile into section 15. There are no streams and no available water-powers. The summer has been fine and warm with occasional showers. There was frost on June 18 which damaged some of the more tender vegetation, but did not destroy the crop of wild fruits. Wood is the only available fuel and is abundant. There are no coal nor lignite veins known in the township. No stone-quarries nor minerals of economic value were noted. Moose, elks and deer are plentiful. Partridges were quite plentiful, several flocks being seen during the time of survey. There were a few ducks on the bay and some of the ponds.—*C. M. Teasdale, D.L.S., 1909.*

(*North outline.*)—The surface along this line is alternately low ridges of
28. good land and hay marshes. The ridges are timbered with poplar and spruce of good quality and frequently of very fair size. The northwesterly part of the township is rather wet.—*E. Bray, 1888.*

(*Subdivision.*)—The trail from Oak Point to Fairford enters this township in section 5 and runs in a northerly direction, leaving the township in section 19. This trail follows the lake and is very wet during wet seasons. The township may also be reached by sailboat from Oak Point or by taking the steamer at Westbourne and then taking a sailboat from "The Narrows" to Elm creek in township 27, range 9, and the trail from there into the township. The soil is mostly a black loam with a clay subsoil, but parts of sections 5, 6, 7, 8, 18 and 19 are crossed by a gravelly ridge. The land where not too badly broken by muskegs is well adapted to mixed farming. The whole township has been burned over, only small clumps of green spruce and poplar being left. This is all grown up with small poplar and willow and in some parts jackpine. There are a few small clumps of spruce and poplar in sections 32, 33, 34 and 11. The sloughs and muskegs do not produce much hay, but some small patches of good hay can be found around them. The ridges are covered with a heavy growth of good hay and pea-vine. There is an abundance of surface water, and good water can be pro-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 9—*Continued.*

cured by digging around any of the sloughs. There are no streams and no available water-power. The summer has been fine and warm with occasional showers. There was a frost on June 18 which damaged some of the more tender vegetables, but did not destroy the crop of wild fruit. Wood is the only available fuel. There are no coal nor lignite veins. No stone-quarries were noted, but limestone comes quite close to the surface in some parts. No minerals of economic value are known to exist. Moose, elks and deer are plentiful, being seen quite frequently during the time of survey. There are a few partridges and prairie-chickens.—*C. M. Teasdale, D.L.S., 1909.*

This township is easy of access, owing to the Canadian Northern railway
29. passing through sections 24, 25, 26 and 35. A station called Hilbre, is situated in the northwestern quarter of section 24. The soil is mostly a heavy clay loam with a clay subsoil and would be suitable for mixed farming; as the marsh and scrub would afford pasture for a limited amount of stock. The surface is slightly undulating and covered with a growth of timber and scrub. A gravelly ridge with a light scrub growth extends through sections 11, 14, 23 and 24. There are several lakes, one occupying a portion of sections 4, 5 and 8, one in section 31 and another in section 35. Considerable marsh land is found in sections 4, 5, 6, 7, 8 and 31. There is a good deal of dry spruce timber in the eastern two tiers of sections, the western half having mostly green spruce, cottonwood and poplar up to twenty inches in diameter. While there is a good deal of marsh land in the southwestern quarter of the township, there is but little hay land. There is no running water, but a good deal of surface water is found in the marshy places, and no doubt water for domestic purposes could easily be obtained by digging. The two lakes in the western part of the township are from five to eight feet deep and contain comparatively good fresh water. No land in this township is liable to be flooded other than by the raising of the water-level from excessive local rains. There are no available water-powers. The climate is similar to that of Manitoba in general with no more summer frosts than are usual in an uncultivated area. Dry spruce and cottonwood are available for fuel and can be procured in large quantities in the eastern half of the township, more especially in the tier adjoining the eastern outline. There are some belts of large green spruce in the western half, more especially in sections 9, 10, 15, 16, 21, 22, 23 and 29, and smaller clumps scattered throughout other sections. A great deal of this spruce would be suitable for building purposes. No indications of coal or lignite were discovered. There are no rock exposures nor rock suitable for quarrying purposes in evidence, although a flat, shaly limestone formation comes near the surface in the northwest quarter of section 24, there being only six to twelve inches of surface soil. Moose, elks and small red deer are more or less plentiful; a herd of twelve to fifteen elks was seen at close range. Prairie-chickens and grouse are also quite numerous. Taking this township as a whole the lands will eventually become valuable on account of their suitability for mixed farming and close proximity to Winnipeg market, railway transportation and the great water areas of lakes Winnipeg and Manitoba.—*J. Gibbon, D.L.S., 1911.*

This township is reached by the trail along the east side of lake Manitoba to
30. Fairford. A considerable portion of it is occupied by the Fairford I. R. north of which only sections 30 and 31 and parts of 19, 29 and 32 are available for settlement. These sections are wooded with poplar and scattered spruce sufficient for settlers' use but not of marketable value. The soil is fair and good for cultivation, but in places it is gravelly. The greater part of the township lies south of the reserve. It is undulating land and is mostly covered with second-growth poplar, a good deal of which has been fire-killed. The soil is, as a rule, inferior, and in places is very gravelly

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 9—*Continued.*

or stony. A great many hay meadows are found, and in sections 1, 12 and 13 an excellent strip of hay land borders lake St. Martin. One or two lakes are found but there are no streams. Water can be obtained by digging. There are no water-powers and the land is not liable to flooding. Summer frosts are not noticeable; good potatoes are grown by the Indians on the reserve. Fuel consists of the timber in the township. No lignite or coal beds were found. No stone nor minerals were seen, but it would seem that the centre and west parts of the township are underlain by a limestone bed. Game consists of grouse and a few moose and elks. Wild fowl are plentiful around Fairford river and lake St. Martin.—*L. R. Ord, D.L.S., 1908.*

This township is reached by the trail from Gypsumville or from Fairford.

31. It is divided by Pineimuta lake which extends through it from north to south.

The soil is of fair quality and suitable for cultivation. In the vicinity of the lake there is some excellent hay and grazing land. The tier of sections along the western boundary is covered with a growth of poplar generally of small size, some of it fire-killed and all useful only for fuel and small log buildings and fencing. This is replaced toward the lake by a strip of hay meadow bordering the marsh, which extends the length of the township and would average a quarter of a mile in width. In the northwest corner a few groves of small spruce and tamarack occur, but they are of no merchantable value. East of Pineimuta lake the land is undulating and mostly covered with second-growth poplar and irregular patches of hay meadow. Where it is not too wet it would be good arable land. Plenty of water can be obtained by digging, but no streams nor water-powers are found. The well water is not alkaline but appears to be strongly charged with magnesia, and cattle avoid it, preferring the surface water. The land along the lake is sometimes flooded to a small extent by the backing up of the water of the lake, caused by the freezing of the lower Fairford river. Summer frosts were not specially noted. Wood for fuel is sufficient for settlers' needs. No coal or lignite beds were found and no stone nor minerals were noted. Game consists of a few grouse and rabbits, and in summer, water-fowl.—*L. R. Ord, D.L.S., 1908.*

(*North outline.*)—There is good level land along the northern boundary,

32. though somewhat broken by hay marshes and a ridge in section 34. The easterly sections of the township are timbered with spruce, tamarack and poplar, while those on the west are timbered mostly with poplar and some scattered spruce. This timber is generally of good size and quality, but a considerable part has been destroyed by fire.—*E. Bray, D.L.S., 1888.*

(*Subdivision.*)—Any part of this township may be reached by trails from Gypsumville, which is connected by the Canadian Northern railroad directly to Winnipeg. The soil is good, producing thick second-growth poplar and luxuriant hay on the open lands. It is a good grazing country, but will never be very satisfactory for grain growing until drained. The surface is quite level with the exception of Gypsum hills in sections 26 and 35. There is considerable open prairie in the southwestern part of the township. Sections 20, 21, 28, 29, 32 and 33 are largely open and flooded in wet seasons, when they become quite marshy. The remainder of the township is covered with second-growth poplar and large spruce, but the most valuable timber has been used and what is left cannot be said to have any value except as firewood. The township is very well watered by a creek which flows out of the low lands. At times this creek is quite large and has a good current, but during most of the year it is small and rather stagnant and produces no water-power. The climate is pleasant, especially in summer, although early and late frosts are liable to occur until such time as the forest is cleared away. No stone-quarries were observed,

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 9—*Continued.*

but there are a few boulders (glacial) in the soil which no doubt could be used for building. No mineral was observed except the gypsum in sections 26 and 35. Moose and partridges were plentiful, but are rapidly disappearing as the township is nearly all settled with homesteaders.—*M. Pequegnat, D.L.S., 1911.*

RANGE 10.

This township like the other townships in the vicinity, is composed of bluffs
17. of green poplar and small patches of hay land, and of poplar woods which were burnt over some years ago. To the west is Big-grass marsh, along the edge of which there is some excellent hay land. The soil, though perhaps not superior to arable land, would be well adapted to pasturage.—*C. P. Brown, D.L.S., 1873.*

This township may be reached by a road and trail which runs east and north from Gladstone, a station on the Canadian Northern railway. Big-grass marsh occupies a considerable portion of the westerly part of the township. The surface is undulating and broken by ridges and numerous hay sloughs. There are numerous poplar bluffs and clumps of willow throughout the township. The poplar is large enough for fuel and building purposes. The settlers are engaged in dairying and cattle-raising, there being an abundance of hay. Water is scarce, being procurable only in the sloughs, and is of poor quality, although cattle appear to thrive on it. There are no water-powers, stone-quarries nor minerals. There are numerous quarter-sections which would raise grain, when brought under cultivation. All kinds of vegetables do well, and are raised in considerable quantities by the settlers. There are no summer frosts, and the climate is good. Wild ducks and prairie chickens are plentiful, and larger game, such as elks, moose and deer, is occasionally met with.—*W. J. Deans, D.L.S., 1906.*

This township is level and covered with a scattered growth of willow and poplar scrub, with a number of bluffs of poplar situated in the northerly part of the township. The soil is black loam, four to ten inches deep with clay and gravel subsoil, and would produce the usual grains of this western country. There are numerous hay sloughs scattered throughout the township in which large quantities of hay might be cut. The Big-grass marsh lies along the westerly side of the township and affords good pasturage for cattle and horses. The water in the sloughs is generally good, but last summer most of them dried up owing to the unusually hot weather and scanty rainfall. There are few settlers in the township, being confined to a few along Big-grass marsh, who are engaged in dairying and cattle-raising. There are no minerals of economic value nor stone-quarries. Small game, such as partridges, prairie-chickens and wild ducks, is plentiful. Moose and elks are occasionally seen. The Canadian Northern railway have recently constructed a line running from Portage la Prairie northerly which passes to the east of the township, and will no doubt help to bring the land into demand as it is well adapted to mixed farming operations.—*W. J. Deans, D.L.S., 1909.*

There is a large muskeg or marsh lying in a northwesterly direction through
18. the whole length of the centre of the township, and another one in the eastern part, with several small ones here and there. These muskegs or marshes occupy about one-quarter the area of the township. The remaining portion of the township is generally timbered with poplar, much of which, however, has been burnt. The soil is shallow.—*C. P. Brown, D.L.S., 1873.*

The surface of this township is very much broken by marshes and shallow lakes. A well-defined gravel ridge, six to eight feet in height, runs northerly through the eastern portion of the township and the trail to Kinosota is located on this ridge,

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 10—*Continued.*

making an excellent natural roadway. The soil is generally a good black loam six to eight inches deep on clay subsoil, but owing to the lakes and marshes, the township (with the exception of that portion along the Kinosta trail) is almost inaccessible during the summer season. The timber is nearly all small poplar under four inches in diameter and mixed with willows. There are a few poplars up to twelve inches in diameter along the ridge and also some stunted oak eight to ten inches in diameter. Very little of the township will be fit for settlement till the marshes are drained.—*W. A. Ducker, D.L.S., 1902.*

This township is thickly wooded, chiefly with poplar and some spruce and
19. willows with thick underbrush. The land lies low and wet in places, with frequent marshes. The timber would be useful for fuel and fencing. The township is not well adapted to agricultural purposes.—*C. P. Brown, D.L.S., 1873.*

The Kinosota trail is located on a gravelly ridge six to ten feet in height running northerly through the east half of this township. An almost continuous muskeg averaging about twenty chains in width extends along the west side of this ridge, rendering the western portion of the township almost inaccessible in summer. There is a heavy slope from the ridge easterly, but the large volume of water which comes through by a couple of creeks and soakage spreads over it and keeps it in a wet condition most of the summer. The soil is generally a black loam six to eight inches deep on a clay subsoil and is of good quality. The timber is mostly small poplar (mixed with willow) and fit only for fuel and fencing. There is some scattered spruce in the north half but not enough to be of any commercial value. This township would not be difficult to drain, and when drained would be well suited for cultivation.—*W. A. Ducker, D.L.S., 1902.*

This township lies to the west of lake Manitoba, and for two or three miles
20. inland the timber is excellent. Farther to the west it consists more of good green bluffs, interspersed among burnt timber, brush and windfall. The soil is of fair quality.—*C. P. Brown, D.L.S., 1874.*

Generally speaking, this township will not be suitable for settlement until drained. The country slopes gradually from a high ridge in the west to lake Manitoba, and in the spring or after a heavy rain the water from this ridge submerges the whole land. The eastern part of the township is covered with poplar, and the western part with sloughs and poplar brulé. When drained, large quantities of hay will be available in this district.—*A. F. Martin, D.L.S., 1901.*

The surface is nearly all covered with poplar of fair quality, but much of it
21. has been destroyed by fires. The strip of open country along lake Manitoba is composed of hay land on the side next the woods, and of marsh with tall reeds, along the lake. During high water the whole of this strip of open country is covered with water. The soil is of fair quality, averaging a depth of about eight inches of black loam with a sandy clay subsoil.—*G. McPhillips, D.L.S., 1886.*

Along lake Manitoba this township is open and marshy and more remote from the lake it is densely timbered with poplar and willow. The chief industries are stock-raising and fishing. Much hay can be procured in the sloughs and marshes. Moose and deer are abundant. Only a small percentage of the land is yet broken.—*G. McMillan, D.L.S., 1907.*

This township consists of about four sections, the remainder being covered
22. by lake Manitoba. The land, in general, is low and marshy with some good hay meadows along the lake shore. The west half of section 24 is covered with dense poplar of large size.—*A. F. Martin, D.L.S., 1894.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 10—*Continued.*

Along the shore of lake Manitoba there is a marsh extending back to the
23. woods a distance of about twenty chains. The woods are chiefly poplar, with a dense growth of willow and underbrush. The timber is only suitable for firewood and fencing. The soil amongst the timber is of fair quality, and when cleared would be good for farming purposes.—*G. McPhillips, D.L.S., 1886.*

Lake Manitoba occupies about one-third of the area of this township. The district throughout is well wooded, but most of the timber has been fire-killed, although in section 31 there is some young poplar and in sections 10, 27 and 34 there are a few heavy bluffs of oak. The country is best adapted to ranching, as the land is gravelly and covered with a luxuriant growth of wild peas. There are also a great number of hay meadows.—*A. F. Martin, D.L.S., 1894.*

With the exception of a marsh crossing sections 7 and 18, on the water frontage, this fractional township west of The Narrows of lake Manitoba is, in
24. general, high lands for this vicinity, being some eight feet above the level of lake Manitoba, but, like the rest of this part of the country, has only a few inches of vegetable soil, covering limestone gravel with occasional outcrops of limestone. In general, the township is covered with a heavy growth of poplar, a considerable portion of which is of sufficient size for fuel and building timber. On the north there is a growth of scrub oak and some birch. Recent fires have killed most of the timber.—*A. H. Macdougall, D.L.S., 1887.*

The open country in this township is flat and generally submerged, the high land is gravelly and covered mostly with fire-killed poplar; in the north half of section 25 there is some poplar timber of fair size. A good deal of hay is to be found along the lake shore. An extensive and very fine quarry of limestone lies in the northeast quarter of section 15 and another extensive quarry lies on Manitou island but this is of practically no value as the stone is of very poor quality and there is no market for it anywhere near. This district is suitable for stock-raising as there is an abundance of fine pasturage and good water. The first Canadian Pacific railway line was located along the lake shore in section 14 and across the lake in section 22.—*A. F. Martin, D.L.S., 1894.*

This township consists of a small strip of land in the west part of sections
25. 6, 19, 30 and 31, and Richard point which occupies parts of sections 1, 2 and 12. There is a small area of good land in sections 30 and 31, and also on Richard point. There is one settler at each of these places. What is known as Reed island, is only a group of low sand bars covered along the edges with long reeds and small willows. There are no water-powers, stone-quarries nor minerals of any description.—*P. T. C. Dumais, D.L.S., 1906.*

This township is only a strip of land composed of the west parts of sections
26. 6, 7, 18 and 19. There are some good patches of land in sections 6 and 7, but the balance is all swampy and is covered with long reeds and small willows. In section 7 there is a bluff of poplar averaging twelve inches in diameter. Some patches of prairie are found in section 6, and also a few hay sloughs. There are no water-powers, stone-quarries nor minerals of any description.—*P. T. C. Dumais, D.L.S. 1906.*

There are no trails passing through this township. In summer it could be
27. most easily reached by boat from The Narrows or Fairford. The soil is a clay loam with a clay subsoil and should make good farming land. The surface is level and is covered with poplar and willow scrub. A considerable area of the township has been burned over within the last few years, and the only timber

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 10—*Continued.*

of any size is along the lake in sections 35 and 26. Hay could be cut in sections 23, 24 and 13. The country back from the lake is very dry. There are no streams. The marsh and hay land in sections 23, 24 and 13 is liable to be flooded as it is very low. There is no available water-power. The summers are usually free from frosts. There is an abundance of dry poplar all over the township, but there are no known veins of coal or lignite. No stone-quarries nor minerals of economic value have been found. Moose, elks and deer are plentiful. There are a few partridges and prairie-chickens. Whitefish, pike and pickerel are plentiful in lake Manitoba.—*C. M. Teasdale, D.L.S., 1907.*

This township may be reached by a trail leading from Oak Point to Fairford
28. which enters the township in section 24 and leaves in section 36. On account of the very level country and numerous sloughs the trail is very bad in wet seasons. There is a line of steamers running from Westbourne to Gypsumville which call at The Narrows in township 24, range 10, and from this point the township can be reached by a sail-boat. The soil is loam which tends to get lighter towards the eastern portion of the township. It is best adapted to mixed farming and stock-raising as there is good grazing throughout the scrubby portions of the township. The surface is level except in section 33 which is slightly rolling and is covered with bush and scrub. Most of the timber except in sections 9, 16, and part of 23 has been destroyed by fire. The timber in these sections is practically all poplar which is of good size, but there are a few scattered spruce and oak. Hay is not very plentiful but some might be cut along the west shore, north of Elm point in section 9. Besides lake Manitoba the only permanent body of water is a lake in sections 34 and 35 which contains fresh water. There are no streams and the land is not liable to be flooded. There is no available water-power. Settlers at Fairford and south along the lake report a very favourable summer and grow all kinds of vegetables, but no grain has been grown as yet. Dry wood is quite plentiful in all parts of the township. No coal or lignite was found. There is an outcrop of limestone along the shore of lake Manitoba at Steeprock point. Rock also comes to the surface in many places throughout the township. No minerals of economic value are known to exist. Moose, elks, and deer are fairly plentiful. There are also a few prairie-chickens and grouse.—*C. M. Teasdale, D.L.S., 1907.*

These townships were reached from Oak Point by the winter trail to
28 & 29. Fairford. The soil is a black loam from one to five inches deep on a clay subsoil. The land is covered with small poplar, willow and a little spruce and oak, all under ten inches in diameter, but no timber suitable for lumbering purposes is found. A large quantity of hay grows in the marshes. Water is abundant in lake Manitoba and in the marshes, but no water-powers exist. The climate is moderate. Fire-killed trees furnish a good supply of fuel. Limestone is found close to the surface and there is said to be a large deposit of good quality adjoining the shore of lake Manitoba. No minerals were found. Moose and elks were the only game seen.—*J. L. R. Parsons, D.L.S., 1907.*

(*East outline.*)—The surface of this township is almost level and is only a
29. few feet above the surface of lake Manitoba. It is chiefly covered with small poplar alternating with willow swamps, muskegs and small hay meadows. The largest muskegs are along the east boundaries of sections 24, 25 and 36. The soil is chiefly black loam from two to eight inches in depth over a subsoil of clay and gravel. At the time of the survey (June) all the willow swamps and hay meadows were full of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 10—*Continued.*

water. A wagon road leading from Oak Point to Fairford crosses this township. Moose, elks and jumping deer are plentiful in this vicinity. A few partridges and ducks were also seen.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This fractional township, consisting of little more than the two easterly tiers of sections, is traversed from south to north by the mail road from Silver Bay post office to Fairford. The land is probably twenty feet above the level of lake Manitoba and the soil is more or less dry and sandy or rocky, and as a rule inferior for cultivation. The surface is covered mostly with second-growth poplar and willow of small size, and in the drier and more barren parts very scrubby and stunted. There is but little timber of any value, one or two small groves of spruce and tamarack along the shore of lake Manitoba. No minerals were found. Moose and elks is but little hay land as the climate is too dry. Surface water is scarce. There are no streams. Summer frosts do not occur. Fuel is not very plentiful as the timber is so scrubby and stunted, and there are no signs of coal or lignite beds, nor of any minerals. The township appears to lie on a bed of cream-coloured limestone, probably magnesian, and it is not known if development would find any good building stone, as all that was seen is thin-bedded and shaly. No game was seen.—*L. R. Ord, D.L.S., 1908.*

30. (*East outline.*)—Fairford river, which is the outlet of lake Manitoba, flows in a northeasterly direction and crosses the east boundary of section 24. At this point the river is three hundred and fifty feet wide and has an average depth of about eight feet and a fairly rapid current. South of the river the line passes over level land, only a few feet above the level of the lake. Several small sloughs and hay meadows, all of which were covered with water at the time of the survey (June), were crossed. A small creek, which flows northwest into lake Manitoba, was crossed in section 12. The dry land is covered chiefly with poplar from two to five inches in diameter and thick willow scrub. On the east boundary of section 13 some brulé and windfall was crossed. Fairford I. R. No. 50 is crossed by this outline. It occupies the portion of section 24 south of Fairford river and also a part of section 13. North of the river the surface is also nearly level. The timber here is somewhat larger than on the south side of the river, poplar and spruce up to seven inches in diameter being found. Small sloughs and willow swamps are also numerous and a tamarack swamp occurs in section 36. The soil is chiefly black loam, from five to eight inches in depth over a clay subsoil, but gravel is found in a few places. The road from Oak Point to Fairford crosses the township. Moose, elks and jumping deer are said to be plentiful. A few partridges and ducks were also seen.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This fractional township on the east shore of lake Manitoba is divided into two parts by Fairford river and by Fairford I. R. to the south of the river. It is traversed by the mail road from Silver Bay post office to Fairford. South of the river a small area comprised of sections 1, 2 and 12 is somewhat dry and barren; it is underlain by limestone and not of much value for cultivation. The timber here is also scrubby, small and of little use, consisting mostly of second-growth poplar. North of the river the greater part of sections 25, 26, 35 and 36 is wooded with poplar and scattered spruce, but none is of large size, and as a rule fit only for small buildings, fuel and fences. The sections bordering the lake contain considerable stretches of hay marshes and meadows, producing good hay. The soil is fair and good for cultivation. There are no creeks, and Fairford river has not sufficient fall to be of use for the development of water-power. The surface water is good but that found in wells is not of the best quality and seems to be charged with magnesia. No coal or lignite nor other minerals were seen. The underlying limestone is of doubtful value as it is much fractured and shaly. No game was seen.—*L. R. Ord, D.L.S., 1908.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 10—*Continued.*

(*East outline.*)—The soil along this outline is inclined to be gravelly and
31. stony, especially on the east boundaries of section 24 and 13. The surface is very gently undulating, and along the east boundaries of sections 24 and 13 is covered with small jackpine, poplar and birch. The east boundaries of sections 12 and 1 pass through *brulé* with a thick growth of small poplar and willow. A trail leading from Gypsumville to Pineimuta lake crosses the line in section 24. No sloughs or hay meadows were seen along this line, but hay can be obtained at Pineimuta lake in township 31, range 9. Moose are said to be plentiful here, but beyond a few partridges no game was seen by any of the party during the survey. Ducks, however, are plentiful around Pineimuta lake in township 31, range 9.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This township is reached by either the main trail along the east side of lake Manitoba or by steamers of the Manitoba Gypsum Company, across the lake. The soil varies in different parts of the township. In the more northerly and also in the southerly sections a loam fit for cultivation with a good clay subsoil is found, but a large portion of the central sections is either sandy and stony or occupied by an extensive area of flat-lying yellowish limestone, in places with scarcely any superficial soil and entirely worthless for cultivation. The township is covered with more or less thick bush with small hay meadows and marsh in the northerly tier of sections and a strip of hay land along the shores of lake Manitoba. In the northerly sections some groves and patches of the original older growth of spruce and tamarack remain, but over the greater part of the surface this has been replaced by a second growth of poplar and willow. In the more rocky sections a stunted and straggling growth of jackpine and poplar is found. The hay lands of the marshes and along the shores of the lake produce a good marsh hay, probably enough for local use, as the township is thinly settled. At the time of survey (November) the country was very dry. Water may be obtained by digging anywhere except in the more rocky portions and even there it is probably only a question of depth as the rock seems to be porous. The water is slightly alkaline and probably charged with magnesia. There are no creeks of any size; one or two small dry channels were encountered. There are no water-powers. The land might be flooded along the lower part bordering on the lake by Fairford river freezing and backing up the lake, but not to any appreciable extent. The climate is probably more rigorous in winter than that of Winnipeg. Good vegetables are grown and summer frosts do not seem to prevail. The only fuel obtainable is the timber covering the surface which is ample for present local use. No coal or lignite beds are known. The beds of limestone might on exploitation yield a fair building stone, but at the surface it is much jointed and very thinly bedded though it might be used in concrete. No minerals of any economic value are known. Game is very scarce; some ruffed and Canada grouse and a few hares were seen. The trail from Fairford to Gypsumville crosses the township about the centre, and the shore trail follows the shore of the lake from the mouth of Fairford river to the point where the Manitoba Gypsum Company has a small wharf for the shipment of the limestone it manufactures into a very good, hard, white wall plaster. This company has a small narrow-gauge railway running from section 21 through the northeast corner of the township to their quarry about twelve miles northeast. The development of this industry would appear to be only a question of time as the supply is ample and the demand constantly increasing. A number of timber berths from which the timber has been cut occupy the northern sections.—*L. R. Ord, D.L.S., 1908.*

(*North outline.*)—Across this township the line passes mostly through dry
32. country covered with woods of a varied character, consisting of small poplar alternating with patches of spruce, tamarack or jackpine. In the west half of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 10—*Continued.*

the range much of the woods has been destroyed by fire, and a growth of small scrub has sprung up. The land is about level, and the soil in the eastern portion of the range is black loam from four to twelve inches in depth over a clay subsoil. On the north boundaries of sections 32 and 31 it is mostly gravel.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township is as yet but poorly supplied with trails, the only one being that used in surveying it; however, this drawback will be probably overcome in the near future as the adjoining township is nearly all settled and the homesteaders' trails may be easily extended into this township, giving access to the Canadian Northern railway at Gypsumville, four and one-half miles distant from its eastern boundary, and to St. Martin, about two miles distant from its southeastern corner. The soil in this township is good and fertile. There are large beaver meadows and marshes which may easily be drained sufficiently to make very good hay lands, while on the higher ground grows a very thick bush of second-growth poplar. Sections 27, 28, 29, 32, 33 and 34 are not so good, as the subsoil is light and gravelly. This township is, however, well adapted to mixed farming, and the richness of the soil will ensure a plentiful return to the tiller. The lowlands, which are quite numerous, are subject to floods in wet seasons, becoming quite soft and marshy in many cases. There is a river navigable for some distance by canoe which enters this township in section 6 and empties into lake Manitoba in the same section. There is no other river and no water-power can be developed in the township. There are a few small areas of valuable building timber. The country seems to have been fire-swept some years ago, and the marsh lands appear to have saved certain areas of timber. However, these are not extensive enough to be exploited, but they will prove valuable to the settler for building timber, as the second-growth poplar is only from two to four inches in diameter. There is an abundance of small timber for fuel everywhere. The township is well watered, as good water can be obtained in shallow wells anywhere. The country is quite even and level, it being slightly rolling in a few places, but there are no large hills. There is a sand ridge running northwest in sections 28 and 32, which will in future be useful as building sand. No minerals nor stone-quarries were observed, but there are a few glacial boulders in the surface soil which no doubt could be utilized as building stone. Game is as yet fairly plentiful, moose, prairie-chickens, partridges and rabbits being observed. No doubt there is a valuable trapping ground along lake Manitoba, but fur-bearing animals are seldom seen in summer time. Lake Manitoba is teeming with fish and should offer a profitable winter employment to any settler within the vicinity; however, as far as I know, there are no settlers in this township up to the present. The climate is pleasant, especially in summer, though still subject to early and late frosts.—*M. Pequegnat, D.L.S., 1911.*

RANGE 11.

The easterly half of this township lies within Big-grass marsh. The westerly **17.** part is a beautiful prairie. The northerly portion is traversed by Big-grass river, whose banks are timbered with thick oak, elm, maple, etc., providing a considerable quantity of wood for fuel and other purposes, and making the township a desirable location for the intending settler.—*C. P. Brown, D.L.S., 1873.*

This township can be easily reached by a good road which runs east from Plumas, a station on the Canadian Northern railway. Big-grass marsh occupies the eastern half of the township. The western half is undulating prairie, broken by hay sloughs, and a number of bluffs of small poplar and willow, the larger ones being north of Big-grass river, which furnish abundance of fuel for the settlers. The settlers seem to be engaged in dairying and cattle-raising, hay being very plentiful throughout the town-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

ship. Little attention is paid to the cultivation of the land, except for raising small quantities of oats and vegetables. However, there is a considerable portion of the township which would raise wheat, oats, etc. Big-grass river flows through the northern part of the township and loses itself in Big-grass marsh. This river is six to eight feet in depth, and one chain in width, with no perceptible current. The water is strongly impregnated with matter, but when boiled is good for all domestic purposes. There appears to be a sufficient quantity for all needs of the settlers. There are no water-powers, stone-quarries nor minerals in the township. The climate is good and free from summer frosts. Wild ducks and prairie-chickens are numerous, and partridges are plentiful in the bluffs.—*W. J. Deans, D.L.S., 1906.*

This township is principally covered with poplar and thick willow brush.

18. The land in the southwestern part is good, but the rest of the township cannot be recommended for settlement. In the northeastern part there are some bad muskegs. The Big-grass marsh covers the four southeastern sections.—*C. P. Brown, D.L.S., 1873.*

The southeast quarter of this township is almost entirely covered by the Big-grass marsh and low hay lands adjoining the same. Almost all of the northeast quarter of the township is low land, partially timbered with willows and some small poplar on the low ridges, and is much broken by marshes and shallow lakes. The west half of the township is level to gently undulating and generally timbered with small poplar interspersed with willow and scrub. A very small proportion of the poplar is over four inches in diameter. Big-grass river flows southeasterly through section 6 and there are a number of shallow lakes with good water in this half of the township. Except in the marshes and low lands, the soil is generally a good black loam six to ten inches deep on clay subsoil. Some of the low ridges are somewhat stony. The west half of the township would be well suited for cultivation if Big-grass river were improved so as to prevent its overflow. There is an immense quantity of hay on the east half and on sections 4, 9, 16 and 21, but almost the whole of this area was under water during the whole of last June, and unless Big-grass marsh is drained, settlers could not reside on it, though large quantities of hay can be cut every year. Sections 6 and 18 are occupied by settlers who have good improvements and considerable areas under cultivation.—*W. A. Ducker, D.L.S., 1902.*

This township may be reached by a trail which runs easterly from Plumas, a station on the Canadian Northern railway. The surface is slightly undulating and is covered with poplar and clumps of willow. There are numerous small hay sloughs throughout the township. The soil is generally black loam with clay subsoil and is well adapted for grain-growing after the ground is cleared. The southeast corner is occupied by Big-grass marsh. The settlers are engaged in cattle-raising and dairying, there being an abundance of hay. Wood for fuel and building purposes is easily obtained throughout. The water in the sloughs is fresh and good and in sufficient quantities for the needs of settlers. There are no water-powers, stone-quarries nor minerals of any description. The climate is good and free from summer frosts. Wild ducks and prairie-chickens are plentiful, and deer are frequently seen in the northern portion of the township.—*W. J. Deans, D.L.S., 1906.*

(*East and south outlines.*)—The country along these lines is alternately

19. poplar woods and marsh. The land is of third-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township contains a large number of muskegs, covered with reeds. The rest of the township is timbered with fine spruce and poplar, much of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

which is large enough for saw-logs. A considerable portion of the timber has been destroyed by fire. The soil is of fair quality, and along the margins of the muskegs there is some good hay land.—*C. P. Brown, D.L.S., 1874.*

- (*North and east outlines.*)—The land traversed by these lines is alternately
20. poplar woods, muskeg and marsh. The poplar is dead in many places. The land is of second- and third-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township is timbered with poplar and spruce, much of which is suitable for the manufacture of lumber. There are many small muskegs, on the borders of which there is a considerable quantity of hay land. The soil is only of medium quality.—*C. P. Brown, D.L.S., 1874.*

- The eastern part of this township is traversed by the road from Westbourne
21. to Kinosota. This is a good road and is often travelled by automobiles. The western part of the township can be reached by the graded roads from the adjoining township to the south. The soil is a clay or sandy loam with peat or muck in the swamps. It will grow the usual grains and grasses and is suitable for mixed farming. The surface is level or nearly level and consists of low ridges covered with scrub and shallow swamps with reeds and sedge grasses, unfit for fodder generally. The ridges and swamps parallel one another in a northerly direction and in some cases extend across the whole township. There is no timber of any value. The scattered patches and fringes left of a once fine forest will supply wood to the first settlers for a year or two. This wood may be found more or less in every section. Hay, during the present season, was very scarce, but in favourable years considerable quantities should be obtainable along the margins of the several swamps. Good water is easily obtained from shallow wells. There are no streams and consequently no water-powers. There are no summer frosts. There are no minerals, coal nor lignite; boulder stones are plentiful and are found on every quarter-section. Game of any kind is scarce. Small fruits, such as raspberries, black currants, cranberries and saskatoon berries, were very plentiful.—*J. Francis, D.L.S., 1912.*

- (*North outline.*)—This boundary is generally covered with poplar and spruce
22. woods, and occasional scrubby prairie and hay meadow. It intersects Ebb-and-Flow lake in sections 34 and 35, and lake Manitoba in section 36. The soil is of second-class quality.—*Hermon and Boulton, D.L.S., 1875.*

(*Subdivision.*)—This township is nearly all covered with poplar woods, a considerable portion of which has, however, been destroyed by fire. In the southwestern part there is a chain of marshes, supposed to be a continuation of Big-grass marsh; marsh land overgrown with tall reeds extends through sections 34, 35 and 36 along the shores of lake Manitoba and Ebb-and-Flow lake. The land may be rated as second-class. The lands along the lakes are well suited for stock-farms, as there is plenty of hay and water and good shelter in the adjoining woods. The settlement of Manitoba House is situated in this township.—*G. McPhillips, D.L.S., 1886.*

This township may be reached by a good trail from Westbourne or Gladstone, stations on the Yorkton branch of the Canadian Pacific railway. There is also a trail from Makinak but about half of the distance is through bush and marsh and in some seasons would be almost impassable. The township is level, except for a few ridges running generally in a northerly and southerly direction. The soil in the southeasterly part of the township is black loam from six inches to a foot in depth with clay subsoil and stones. In the rest of the township it is generally sandy and stony. The southeasterly part of the township is covered with a thick growth of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

white poplar from eight to twelve inches in diameter. In sections 20 and 21 there is a small bluff of spruce suitable for building purposes. The rest of the township is covered with poplar, willow scrub and thick underbrush with dead standing poplar in places. In a great many sections there is a lot of fallen poplar, and thick willow and poplar scrub so that it would require considerable work to clear the land. There is some hay along Garrock creek, a stream of good water some fifteen links wide which enters the township in section 3 and runs northeasterly into lake Manitoba. Most of the hay is cut in the sloughs which are scattered throughout the township and in the marshes adjoining Ebb-and-Flow lake. A stream of good water ten to fifteen links wide rises in a lake situated in sections 18 and 19, and flows northeasterly into Ebb-and-Flow lake. The lake in sections 18 and 19 contains good water and has a high and dry beach at the northeasterly corner; there is some hay land adjoining it in many places and large marshes occur on the north and south sides. There are no water-powers, stone-quarries nor minerals of economic value in the township. The settlers are mostly half-breeds, descendants of the early settlers, who are engaged in cattle raising, fishing and hunting. This last season a number of English and American settlers have taken up land. The township is well adapted to mixed farming and will no doubt be well settled in the near future as the Canadian Northern railway is building a line to Makinak which will pass close to this township. Game, such as moose and elks, is plentiful and lake Manitoba abounds with the usual fish of this western country. This part seems to be free from summer frosts; vegetables do well and attain great perfection. Kinosota, where there is a post office, school and church, is situated on one of the lake lots in front of the township.—*W. J. Deans, D.L.S., 1908.*

23. The land along the lake is marshy, the width of the marsh varying from a few chains to nearly a mile; in rear of the marsh the township is timbered with poplar and spruce, with a limited amount of tamarack. The soil in the wooded portion is of fair quality and will make good farming land.—*G. McPhillips, D.L.S., 1886.*

Ebb-and-Flow lake occupies a considerable portion of this township. The soil is gravelly and of poor quality. The northeastern part of this township with the exception of the northeastern quarter of section 35, which is low and flooded, is most densely wooded with green poplar, oak, birch and a thick underbrush of hazel.—*A. F. Martin, D.L.S., 1894.*

This township may be reached by a good trail running from Westbourne or Gladstone, stations on the northwestern branch of the Canadian Pacific railway. The surface is level and covered with a thick growth of willow and poplar scrub with standing dry poplar and windfall. In sections 3, 4, 5 and 17 there is some white poplar averaging eight inches in diameter. Section 8 is covered with spruce and poplar averaging eight inches in diameter. The soil consists of six inches of black loam with clay, stones and gravel, except that portion lying west of the marsh along Ebb-and-Flow lake which is black loam with a sandy subsoil. The cultivated land is confined to a small strip west of the marsh. Ebb-and-Flow lake occupies the easterly part of the township. There is sufficient hay for the requirements of the settlers in the marshes adjoining the lake. A small stream of good water enters Ebb-and-Flow lake in lot No. 2. The principal settlers are half-breeds who are engaged in cattle-raising, fishing and hunting and depend largely on the fishing industry as a means of making a living. Jackfish, whitefish, tullibee and pickerel abound in the lake and large quantities are caught and shipped to Westbourne. The want of railway communication is a serious drawback to the settlement of this part of the country. There are no stone

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

quarries, water-powers nor minerals of economic value. Game, such as moose and elks, is moderately plentiful. Small fruits, such as raspberries, saskatoon berries and cranberries, are plentiful. This part is free from summer frosts and vegetables do well, although the settlers do not appear to do much in gardening, confining their efforts to other pursuits.—*W. J. Deans, D.L.S., 1908.*

The northern part of this township contains some good arable land, but the
24. greater portion is poor, there being but a few inches of vegetable mould on the surface covering the limestone gravel which prevails throughout this vicinity. In many places the solid limestone rock comes to the surface. In general the township is timbered with poplar of sufficient size for fuel.—*A. H. Macdougall, D.L.S., 1887.*

There is some good arable land scattered through this township, but most of
25. it is second-class, with a large area of marsh, particularly through the central portion and on the water frontage. The whole surface is covered by a few inches of vegetable mould, generally covering limestone gravel. In general the township is timbered with poplar large enough for fuel; recent fires have killed most of the timber in the western part and in a few places in the eastern portion of the township. This township will make excellent grazing ground; although there is no running water, several large bogs project into it, and with a few small lakes afford ready access to water from all parts.—*A. H. Macdougall, D.L.S., 1887.*

From Makinak station on the Canadian Northern railway in township 23, range 16, the shortest route to reach this township is by the graded road going east as far as Ste. Amélie, a distance of fifteen miles, and thence by the old trail to Ebb-and-Flow Lake Indian reserve. From the reserve there is a cart trail running north on the west side of Ebb-and-Flow lake as far as Crane bay on lake Manitoba in township 30, range 13. This township could also be reached in summer by boats that generally run from Oak Point which is situated near the south end of lake Manitoba. The surface is broken by a bay of lake Manitoba, which covers parts of sections 21, 22, 27, 28, 29, 31, 32, 33 and 34. On the east side, sections 12, 13 and 24 are partly covered by lake Manitoba, and on the southwest, Ebb-and-Flow lake extends over parts of sections 5, 6, 7, 8 and 18. The soil is mostly sandy loam with a subsoil of clay, but in some places sand and gravel are found. The settlers cultivate no grain but grow potatoes and all sorts of vegetables. They have good herds of cattle, the country being well adapted to stock-raising. The land is good for farming, but where the settlers are located it is so flat that it is liable to be flooded in the rainy seasons. Along the lake and bays are large muskegs covered by reeds from eight to ten feet high. There are numerous hay sloughs which grow quantities of good hay. The south part of this township is heavily timbered in places with poplar up to fifteen inches in diameter. There is also some scattered spruce and small oak which may be used for building and fencing. A large part of this township has been fire-swept and the fire-killed poplar will furnish any quantity of fuel. The country is very level all over this township. There are no water-powers, no stone-quarries and no minerals of any description in this township. Moose, elks and jumping deer are numerous. There are also great numbers of rabbits and a few partridges. Pike and whitefish are caught in great numbers in lake Manitoba.—*P. T. C. Dumais, D.L.S., 1906.*

This township is mostly marshy, with some meadow land and timber in the
26. southeast corner. The timber is poplar of considerable size; towards the eastern boundary stumps and logs, scattered through the meadow land, show the remains of what has once been an oak forest, now represented by a few scrub oak. A

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

few small lakes are in the marshy portion of the township. The soil is a black sandy loam of second-class quality.—*A. H. Macdougall, D.L.S., 1887.*

This fractional township consists of sections 1, 2, 12 and part of sections 3, 4, 6, 7, 11, 13 and 14. It is broken by lake Manitoba and by five small lakes, section 1 being the only one which is unbroken. There are some good patches of land in sections 1, 2, 3, 4 and 12, but the remainder is all swamp and muskeg covered with long reeds and small willows. The soil is mostly sand, clay and gravel covered with from four to six inches of black loam. Parts of sections 1, 2 and 12 are well timbered with poplar up to twelve inches in diameter. There is also some small oak and birch and a great deal of willow scrub. Cherry island, on the north boundary of this township, is only a swamp sand bar covered with long reeds and willows along the shore. There are no water-powers, nor stone-quarries and no minerals of any description.—*P. T. C. Dumais, D.L.S., 1906.*

This township can be best reached by boat from The Narrows or from Fair-
27. ford. The whole township consists of a marsh with a beach about a chain wide on the west side which is covered with elm, maple, poplar and willow. Some hay could be cut along the shore in dry years. There are some small ponds and a small lake along the west side of the marsh. The whole marsh is on practically the same level as lake Manitoba and is liable to be flooded. There are no indications of summer frosts. There are no known coal or lignite veins in the township. No stone-quarries nor minerals of economic value have been found. Ducks are very plentiful during the summer and fall. Whitefish, pickerel and pike are found in lake Manitoba.—*C. M. Teasdale, D.L.S., 1907.*

(*North outline.*)—In this township the line crosses Peonan point, a long
28. narrow peninsula extending from the north end of lake Manitoba to about nine miles south of this line. It has a width on the line of about three miles, the east shore being reached in section 35, and the west shore in section 32. Along each shore is a strip, about half a mile in width, of wet, marshy land, part of which is hay land, but the greater part of which is covered with tall reeds and rushes. The interior of the point is mostly wooded with poplar; but many marshes and muskegs are found. The soil is chiefly black loam over a clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township can only be reached by boat in the summer. There is a good beach and harbour in the northeast part of section 14 where boats go in for wood. The soil in the bush is a clay or clay loam, but towards the shore it is loam with a gravelly or stony subsoil. It is best adapted to stock-raising. The surface is level. Sections 33 and 34 and the easterly portions of 32, 27, 22, 15, and 10, also the westerly portions of sections 35, 26, 23, 14 and 11 are covered with poplar bush and willow scrub, considerable of which has been killed by fire. The remainder of the township is principally slough and marsh. Large quantities of hay could be cut as there is considerable land high enough all around the bush to produce the best of hay. The most of the land that is not covered by bush is marshy and does not produce hay. Several lakes and ponds occur through the marsh in the westerly portion of the township. There is very little alkali in any of the water. The whole of the township is very low and at high water and during storms the marshes are flooded. There are no streams and there is no available water-power. Summer frosts are said to be rare. There are no stone-quarries nor minerals of economic value. Moose are very plentiful in this township, several being seen during the survey. There is an abundance of whitefish, pike and pickerel in lake Manitoba.—*C. M. Teasdale, D.L.S., 1907.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

There are no trails in this township. It can, however, be easily reached by
29. boat from Fairford, a settlement on the east side of lake Manitoba, or from Winnipegosis, both of which places are served by railway (Canadian Northern railway). The soil of this township is good and has a good clay subsoil. It is suitable for grazing and mixed farming. There is some waste land, most of which lies in a strip running north and south covering parts of sections 8, 9, 16, 17, 21, 28, 29, 30 and 33. This appears to be an old lake and even yet there is a considerable area of it open water. It has a gravel bed and is overlaid by a layer of black muck and peat. On this area a heavy crop of tall reeds grows annually which adds to the peaty deposit. There are other smaller areas of marsh, especially along the shore. There is some good natural hay land along the west side. With the exception of the marshes and a considerable area of hay land along the west side, the township is covered with bush consisting of poplar and willow. There is much gray willow along the lake-shore, but it is almost a solid poplar bush in the interior with willows about and sometimes in the marshes. The bush is mostly quite young with scattered trees of cordwood size, but is dense and thick on the ground. There is perhaps thirty-three per cent of it black poplar, commercially of no value, but of use to the settler as fuel. The township is well watered. It can be obtained anywhere in shallow wells. Neither valuable minerals nor outcrops of rock were noted. There is a fair sprinkling of glacial boulders in the surface soil which will be of use to the settler in masonry building. The climate is pleasant, but it will probably be subject to summer frosts until a great portion of the forest is cleared away. Two slight frosts were noted this season, but they were not severe enough to damage ordinary crops. It is possible that the presence of so large a body of open water may protect this land from these freak frosts which so often causes heavy losses to the early settlers. Game is plentiful, moose, jumping deer, partridges and prairie-chickens being observed while surveying operations were being carried on. All of this township is close to the lake and, when farming operations are at a standstill during the winter months, the settler will be able to make good returns from fishing. Whitefish, jackfish, pickerel and suckers are quite plentiful. This is a real advantage as there is a keen demand for these fish. It is estimated that at least \$25,000 worth of fish was shipped from Fairford during the season of 1911-12.—*W. E. Taylor, D.L.S., 1912.*

There are no trails in this township. It can, however, be easily reached by
30. boat from Fairford on the east side of lake Manitoba. The soil is good where it is high and free from flood. It is suitable for general farming and grazing. There is considerable marsh and low land along the lake. Good hay land is very scarce in this township. This, however, will be an ultimate advantage as the land where it is not marsh is better than the hay land. With the exception of the marshes it is covered with poplar bush. Much of this has been recently fire-killed and could easily be made ready for crops. There is a good cordwood bush in sections 14, 15, 22, 23, 26 and 27. Part of this is dead. There is at present no market for this cordwood, but conditions may change in this respect. There is a small quantity of good spruce in section 28. The township is well watered having a long shoreline. Inland good water can be obtained in shallow wells. There are no rivers or streams. No valuable minerals nor quarries were observed and probably none exist. There are a few glacial boulders showing in the surface soil which will probably be of value to the settler for masonry work. The surface is quite level and where it is not subject to flood has sufficient fall for drainage. The climate is pleasant but it will probably be subject to summer frosts until a great portion of the forest is cleared away. Two slight frosts were noted this season but they were not severe enough to damage ordinary crops. It is possible that the presence of so large a body of water may protect this land from

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

these freak frosts, which so often cause heavy losses to the early settlers. Game is still plentiful, moose, jumping deer, partridges and prairie-chickens being observed while surveying operations were being carried on. During the winter months, when farming operations are at a standstill, the settler will be able to make good wages by fishing in the lake. Whitefish, jackfish, pickerel and suckers are quite plentiful. This is a real advantage as there is a keen demand for the fish. It is estimated that at least \$25,000 worth of fish was shipped from Fairford during the season of 1911-12.—*W. E. Taylor, D.L.S., 1912.*

There are no trails in this township. It can, however, be easily reached by
31. boat from Fairford on the east side of lake Manitoba. The soil is good where it is high and free from flood. It is suitable for general farming and grazing.

There is considerable marsh and low land along the lake. On much of this land good hay grows, but only on a limited area could it be cut and saved in the average season. Much of this low-lying land is subject to flood from the lake. Almost all the dry land is covered with poplar bush with considerable willow on or about the wetter land. Most of the bush is quite young but at the northwest corner it approaches cordwood size. There is no commercially valuable timber, but it will be valuable to the settler. The township is well watered, having a long shoreline and in fact none of it is far from the lake. Inland, water can be obtained everywhere in shallow wells. The Basket river empties into the lake in section 34, but the land about the mouth is so marshy as to make it almost unapproachable from the land. The river is quite wide for the first half-mile or so, but it narrows to about forty feet. The current is almost unnoticeable at its mouth, but farther up it is about four miles per hour. It is about four feet deep in the early part of the season, and one can ascend it to Basket lake about seven miles to the north, in a canoe or flat-bottomed rowboat. However, it dwindles to a very small stream in dry seasons. No valuable minerals nor stone-quarries were observed and probably none exist. There are a few glacial boulders showing in the surface soil which will probably be of value to the settler for masonry work. The surface is quite level and where it is subject to flood has sufficient fall for drainage. The climate is pleasant but it will probably be subject to summer frosts until a great portion of the forest is cleared away. Two slight frosts were noted this season, but they were not severe enough to damage ordinary crops. It is possible that the presence of so large a body of open water may protect this land from these freak frosts which so often cause heavy losses to the early settlers. Game is still plentiful, moose, jumping deer, partridges and prairie-chickens being observed while surveying operations were being carried on. None of the quarter-sections are far from the lake. During the winter months when farming operations are at a standstill the settler will be able to make good wages by fishing in the lake. Whitefish, jackfish, pickerel and suckers are quite plentiful. This is a real advantage as there is a keen demand for these fish. It is estimated that at least \$25,000 worth of fish was shipped from Fairford during the season of 1911-12. The island in section 4 is almost all good agricultural land. It is, roughly speaking, one and a quarter miles long and somewhat less than a quarter of a mile wide. It is well timbered with poplar and some oak, birch and spruce. The timber is large enough for cordwood. The water is of good depth about the island and it can be reached by a good-sized boat. There is a sand-bar running between the island and the mainland on the south so that one can walk to it in water less than knee-deep.—*W. E. Taylor, D.L.S., 1912.*

(*North outline.*)—The eastern half of this township is similar to range 10,
32. being covered with poplar and spruce much of which has been destroyed by fire, and having numerous sloughs and marshes. A small stream, known

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 11—*Continued.*

as Powderhorn creek, crosses the line in section 34. In the west half of the range the line crosses extensive muskegs with bluffs of tamarack and willow. Basket lake lies about half a mile to the south of the line, partly in range 11 and partly in range 12. This lake is about three miles from east to west and from two to three miles from north to south. Basket creek flows from this lake to lake Manitoba. This creek has a fairly rapid current, which would appear to indicate that Basket lake is at a considerably higher level than lake Manitoba, and points to the possibility of much of the adjoining swamp land being drained. The soil is black loam on a clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—There are no trails in this township. However, it may be easily reached from Fairford, a station on the Winnipeg-Gypsumville branch of the Canadian Northern railway, by crossing lake Manitoba by boat and ascending the Basket river. The soil is good and there is a very desirable subsoil. It is suitable for grazing or farming with the exception of some areas of muskeg and marsh land. The entire area is covered with forest. The bush is largely poplar and most of it is quite young, not even large enough for cordwood. Sections 17, 18, 19 and 20 have some large poplar and spruce up to twelve inches in diameter. There is some fair spruce and tamarack in sections 23, 24, 25 and 26. Sections 1, 12 and 13 have some poplar that will make good cordwood in a few years time. There are also small groves of large trees that seem to have been missed by the fire which destroyed the original valuable spruce of this land. The land is quite level, but has plenty of fall for drainage which is very necessary to its development. Good natural hay land is not plentiful. There were many small marshes which grew good hay, but it could not have been cut this season as all these low lands remained in a state of flood through the entire summer. There is an abundance of good fresh water to be had in shallow wells. The township is well watered, there being two small streams traversing it. The largest is the Basket river, a stream of about forty feet in width, four feet in depth, and with a current of four miles per hour in high water. It is fed from Basket lake which in turn is fed from extensive marshes which lie to the north. In very dry seasons when these marshes dry up, more or less, the river dwindles to a trickling stream. Powderhorn creek is a very similar stream and is similarly fed, but it is much smaller, its dimensions being fifteen feet wide and three feet deep with a current of about three miles per hour. In dry seasons it likewise dwindles to almost nothing, and it is not navigable at any time farther than a mile from its mouth. There are several areas of land subject to flood, the largest being around Basket lake and a narrow strip along the Basket river, widening out to a marshy plain half a mile wide at its mouth. Smaller areas are subject to flood from lake Manitoba. The climate is pleasant, but it will be subject to summer frosts until a large portion of the forest is removed. Two slight summer frosts were noted this season but they were not severe enough to damage ordinary crops. There is an abundance of fuel for the settler even where the bush is of young growth which is fortunate since there are probably no coal nor lignite deposits in this district. In future the large peat bogs lying north will probably be a valuable source of fuel supply. There are some glacial boulders scattered over this entire area which will probably be convenient to the settler for masonry. There is limestone in sections 19 and 20, also in sections 18 and 7, which appeared to be of good quality. Game is fairly plentiful as yet, moose partridges, prairie-chickens and muskrats being the most plentiful.—*W. E. Taylor, D.L.S., 1912.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12.

(*South outline.*)—This line runs over a level prairie, with scattered bluffs of
17. poplar and willow scrub. The soil is a first-class sandy loam.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—This township is well watered by a small river, and the soil is of the best quality. There is scarcely enough wood, but a thrifty young growth, at present from six to ten feet in height, will, if protected from the ravages of fire, in a few years make ample provision for fuel and farming purposes.—*C. P. Brown, D.L.S., 1873.*

The soil of this township is good, more especially in the southern part, and
18. there is plenty of wood for the needs of the farmer. It is traversed by Big-grass river, which supplies excellent water.—*C. P. Brown, D.L.S., 1873.*

(*South outline.*)—The country along this line is an open country, with many
19. bluffs of poplar and patches of willow brush, and an occasional hay marsh. The land is of second-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township is mostly wooded with poplar. In the southeastern corner there are bluffs of good spruce sufficient for the wants of the settler. The soil is good, and there is an ample quantity of hay land and plenty of good water.—*C. P. Brown, D.L.S., 1874.*

The northeast part of this township is a net-work of muskegs running north and south and separated from one another by narrow belts of poplar. The remainder is covered with willow and poplar scrub and large bluffs of poplar. Although the soil is light there is some very good land, the clay subsoil coming to the surface in many places. Eight or ten settlers have already taken up land, but so far have made few improvements. In one day we have met as many as seven parties of home-seekers, all of whom expressed their intention of taking up land in this township in the following spring.—*J. E. Woods, D.L.S., 1897.*

(*North outline.*)—The country along this line is generally covered with poplar
20. and spruce woods, intermixed with willows. There are several small marshes throughout the township. The land is of second and third-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township is timbered with poplar and spruce, with an undergrowth of willows. Much of the spruce is of sufficient size to supply the wants of the townships lying to the south. There are several marshes in the township. The water is excellent, and the land is well adapted to stock-raising.—*C. P. Brown, D.L.S., 1874.*

This township is level, except in the northeasterly corner, where the land is undulating. The soil is black loam eight to ten inches deep, with clay and gravel subsoil and is well adapted to the production of the usual grains of this western country. The surface of the township is covered with a thick growth of poplar and scrub. In the northeasterly quarter of the township there are large bluffs of green poplar from four to ten inches in diameter, very straight and tall, which would make good fencing and building material. The sections in the western part are covered with dry poplar eight to twelve inches in diameter which is suitable only for fuel. The southeasterly quarter of the township contains many large sloughs and hay meadows where large quantities of hay are cut. There is a ridge running northwesterly which enters the township in the middle of section 6 and leaves it about the middle of the west boundary of section 18. There is a splendid trail along this ridge which is about the only good trail in the township. Good water can be obtained any place

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

along the ridge at a depth of not more than ten feet. The water in the sloughs throughout the township is generally fresh and good. There are no minerals of economic value nor stone-quarries. Small game, such as wild ducks, is plentiful in season, and I saw numerous indications of the presence of elks and moose. The settlers are principally Galicians, who are engaged in mixed farming and appear to be doing very well, considering the short time that has elapsed since their arrival. The principal market and railway station is Glenella on the Canadian Northern railway, where all kinds of farm produce can be sold at a good price.—*W. J. Deans, D.L.S., 1909.*

This township is easily reached from the south by the opened and graded
21. road allowances through the adjacent settled township. The soil is a clay loam with a gravelly clay subsoil on the higher grounds, while in the bottoms and swamps it is peaty. The numerous swamps will require to be drained before this becomes a good grain district. Mixed farming will be more suitable for the first settlers. The surface is nearly level, low ridges alternating with shallow swamps running generally in a northerly direction. Poplar and willow scrub covers the dry ground while the swamps have more or less reeds and poor grasses. Bluffs of poplar in section 23, the west half of section 14 and the southwest quarter of section 18 contain trees fit for log buildings. Scattered patches of small timber, which escaped the ravages of the last great fire, may be found still in every section in the township. This being a poor season for hay, 300 tons would total all that could have been cut and about half of this was put up by settlers in the adjoining township. In favourable seasons large quantities could be obtained. The water in the swamps, if the ponds were of sufficient size, remained good during the summer, while splendid water may be obtained almost everywhere by digging wells from two to ten feet deep. There are no streams in this township. There have been no summer frosts in this vicinity at any time. Fuel is abundant in the form of small poplar, both dead and green, and can be procured in every section. There is no coal and no trace of other minerals was seen. There are no stone-quarries but plenty of boulders may be obtained on the higher parts of the ridges. Game was very scarce.—*J. Francis, D.L.S., 1912.*

(*North outline.*)—The country along this line is alternately willow marshes,
22. intermixed with reeds and rushes, and slightly rolling land covered with poplar and spruce woods. The soil is of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—This township may be reached from the adjoining township to the east in which there are many settlers. Trails have been made by them to the many hay meadows found in the east half of the township. The northwest part of the township is crossed by an old trail from the Ebb-and-Flow I. R. to McCreary, a station on the Canadian Northern railway. These trails are not good except in winter or in a very dry season. The soil is a stony clay loam, suitable for mixed farming. The surface is nearly level, and consists of low scrub-covered ridges alternating with wet, reedy swamps, some of which have from two to five feet of water. There is no timber of any value in this township. The hay was very poor this season, but in favourable years considerable quantities could be obtained around the margins of the different swamps. All water is fresh and good, and could be obtained almost everywhere from wells at no great depth. There are no streams in the township. On September 18th, the first summer frost occurred. There is no coal, but plenty of fuel may be obtained from the scattered patches of poplar left from the last bush fire; this is scattered throughout, but may be found more abundantly in sections 2, 11, 14, 23, 26 and 35. There are no stone-quarries, but plenty of boulders may be found in every section.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

No minerals were noticed. A few elks were seen, and some ducks were observed in the very deep marshes.—*J. Francis, D.L.S., 1912.*

(*South outline.*)—Along this boundary there is level land timbered with
23. poplar, scrub and scattered spruce. There are a number of marshes with hay and willow scattered throughout. There is a small lake in section 2. The soil is of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—This township may be reached either from Makinak, on the Canadian Northern railway main line, or by a branch of the Canadian Northern railway from Ochre River to Ste. Rose du Lac, a distance of twelve miles. From Makinak there are stage connections—three times a week—the year round to Ste. Rose du Lac and thence to St. Amélie. Ste. Amélie is situated at about the centre of township 23, range 14, and a good wagon trail runs from Ste. Amélie through the centre of township 23, range 13, thence easterly through this township to township 23, range 11. This trail passes through a few muskegs and some timber, but it can be travelled easily by wagon or sleigh, although it is very wet and soft in spring. It is used to some extent in the winter, as it connects with a mill in township 23, range 11, and also with an Indian reserve at the northeast corner of township 23, range 12. It is also used for drawing hay, which is cut on these muskegs in summer, and also by hunters. The soil in general is a dark loam of about four or five inches in depth over clay and gravel. There are a number of gravel ridges and muskegs. Some of the muskegs are very wet and boggy. The township is mostly covered with scrub and some fairly large poplar. There are some ridges covered with boulders. The surface as a whole is rolling. Most of the large timber has been cut, and the remainder has been destroyed to some extent by fire. It consists of poplar, spruce and tamarack. The poplar for the most part, is small, averaging from ten to fourteen inches in diameter, with poplar, willow and rose underbrush. To the east there are a few spruce and tamarack, averaging from eight to sixteen inches in diameter, most of which have been killed by fire and the good logs cut. The timber, as a whole, is of commercial value for cordwood or pulp wood, some perhaps for building. Hay is found in large marshes along bogs which are fairly dry about the middle of July. Good water may be obtained in any of the marshes by digging a few feet. The climate is changeable, dry and hot in the day-time and cold in the evening. In all parts there is an abundance of fuel for settlers, but not in sufficient quantity to be of commercial value. There are large granite boulders, some limestone but no trace of minerals. Game is plentiful and consists of moose, elks, jumping deer, bears and coyotes. Rabbits, partridges and a few prairie-chickens are to be found.—*A. Fawcett, D.L.S., 1912.*

(*North outline.*)—The country along this line is alternately poplar wood and
24. willow marsh. The soil is a clay loam of second-class quality. Ebb-and-Flow lake cuts off a large part of the eastern portion of the township.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—This township contains very little first-class land, in general there being only a few inches of vegetable mould on the surface covering the limestone gravel, and occasionally limestone rock. In the northern portion there is considerable meadow and scrub land; the southern is timbered with poplar from three to ten inches in diameter, some of which is fit for building timber. Towards the southwest groves of spruce and tamarack occur; a few of the trees are large enough to make railroad ties. Fires have run through recently, and a large portion of the timber, though standing, is dead.—*A. H. Macdougall, D.L.S., 1887.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

From Makinak, a station on the Canadian Northern railway, in township 25. 23, range 16, there is a good trail that goes nearly east to the Indian reserve on the west side of Ebb-and-Flow lake, and from this point there is a trail going north which crosses the township from section 2 to section 34. There are also two other trails, one along the west bank of Ebb-and-Flow lake, and the other across sections 5, 6 and 7, to the west of Lonely lake. Most of these trails run at the edge of hay sloughs and for this reason they may not be passable in the wet season. The distance from Makinak to the centre of this township by the trails mentioned above would be nearly forty miles. The soil is generally a mixture of clay, sand and gravel covered with a surface of black loam varying from three to eight inches in depth. It should be suitable for agriculture if we compare it with similar soil in township 23, range 14, where settlers have cleared the land and are praising the quality of their homesteads. About three or four years ago fire ran through the south and west parts of the township, and the timber is nearly all fire-killed, but standing; on the north and east parts fire has also run through a few places, but most of the timber is still green; the poplar averages seven inches in diameter, and a considerable quantity can be utilized for building purposes. There is a large muskeg and hay slough principally in the vicinity of Lonely lake, and east of it, where a quantity of good hay can be made. Part of these large sloughs are covered with thick weeds about eight feet high, and small willow scrub. Lonely lake has an area of a little over seven square miles. Ebb-and-Flow lake, which is a bay of lake Manitoba, covers part of sections 1 and 12. The water in the lake is good and fresh; the bottom is gravel and seems to be shallow—at many places of sounding we never found more than eight feet. Good water is easily obtained in any other part of this township by digging a few feet. There are two creeks which empty into Lonely lake; one of them in section 18, coming from the west, was dry at the time of the survey, but its bed seems to carry a big body of water when the country is wet. The other creek is in section 22 and flows from the north; it is eighteen feet wide and from two to three feet deep and has a slow current. Dry poplar is plentiful for fuel. There is no available water-power. No stone-quarries nor minerals were found. Moose, elks and jumping deer were numerous last fall. Partridges and rabbits are in abundance. Jackfish and whitefish are caught in the lakes.—*P. T. C. Dumais, D.L.S., 1904.*

The centre of this township is situated at a distance of twenty-seven miles 26. by trail from East Bay, a post office near lake Dauphin, and is about forty-nine miles from Makinak, a station on the Canadian Northern railway, in township 23, range 16. From this place to East Bay, there is a well-graded road. To go farther east there is a wood trail for four miles, and from there we opened a winter trail through townships 26, ranges 15, 14, 13 and 12, as far as lake Manitoba. The soil in this township consists of a black loam from four to ten inches in depth and a sub-soil composed chiefly of clay, with some gravel and sand in places, especially in the west half. A large part of the east half of the township is covered by lake Manitoba. Large muskegs border the lake, extending in some places for over half a mile from the shore. Long reeds and small willows grow in these muskegs and in most of the large sloughs which are numerous all over this township. There are also many hay sloughs where large quantities of good hay can be made in dry seasons, but this country being very flat there would be some difficulty in making hay in a wet season. There is no valuable timber in this township. The best of what there is, is good only for small buildings, fencing and fuel. There are no water-powers, stone-quarries nor minerals. Moose, elks, and jumping deer were numerous at the time of the survey. Rabbits are in abundance and there are plenty of pike and whitefish in lake Manitoba.—*P. T. C. Dumais, D.L.S., 1906.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

Makinak, a station on the Canadian Northern railway, is the nearest
27 & 28. railroad point to this township. Township 27 is very flat and wet. Fully two-thirds of it is hay slough and very wet marsh. The soil consists of a few inches of sandy loam over a hard-pan clay with gravel and boulders. If drained it would make excellent grazing land and would be suitable for stock-raising. The part lying along lake Manitoba, for an average distance of about one-half mile from the lake, is wet marsh with bunches of willow. Township 28 is very similar, except that there is more wood, a low flat ridge of thick small poplar running nearly north through it. This ridge, only a few feet above the rest of the township, is broken by numerous sloughs and marshes. The soil is poor and stony. Township 27 is rather open, about two-thirds of it being hay slough and marsh. The country is so flat and low, being only a few feet in any place above the level of lake Manitoba, that it would be difficult to drain it. Without drainage, except in dry seasons, the country would be useless for either farming or stock-raising. In township 27 there is very little wood of any use. There are some bluffs in the southwest portion, having trees of poplar up to four inches in diameter which would be suitable for firewood. Most of the timber growth in this township is small poplar, willow and scrub, of no use for any purpose. In township 28 some small building logs could be got, but most of the timber is fit only for firewood. In dry seasons an abundance of hay could be cut in these townships. Nearly every section has its hay sloughs, but the most of the hay is to be found in township 27, along the shore of lake Manitoba. Without drainage it is only in dry seasons that much hay could be cut. There are no streams in these townships, and no water-powers, but there is an excess of water everywhere. The marshes and sloughs everywhere were covered with from six inches to four feet of water. This water is somewhat hard but of fairly good quality. The climate is similar to that of the remainder of Manitoba. There would likely be considerable summer frost. Wood is the only fuel. No stone was seen except boulders, of which there are plenty of all sizes, but they are not suitable for building purposes. No indications of minerals were observed. There are some moose, elks, and jumping deer. Very few partridges or prairie-chickens were seen. There are quite a number of muskrats and minks. A few coyotes were seen. In the season wild ducks are plentiful.—*P. T. C. Dumais, D.L.S., 1907.*

The greater part of the township is occupied by lake Manitoba, the west shore
28. of the lake being reached in section 32. In section 31 the line passes through country similar to that in range 13. Along the shore of the lake there is a strip of low, marshy land of varying width. The soil is black loam on a clay subsoil.—*W. Christie, D.L.S., 1907.*

Makinak, a station on the Canadian Northern railway in township 23, range
29. 16, is the nearest railway point to this township. There is a good wagon road from this point to Ste. Rose du Lac, distant about twelve miles. From here a trail crosses ranges 15, 14, 13, and 12, joining the trail to Crane River I. R. in township 24, range 12. This latter trail runs in a northerly direction, passing through the township to the west. It is a poor wet trail except in a very dry season. There is very little good land in the township, the soil being a few inches of loam over a subsoil of hard-pan, gravel or boulders. About one-half the area is marsh or wet hay slough. It is suitable for mixed farming. This country is very flat, being in no place more than a few feet higher than the surface of lake Manitoba. There are no water-powers. The climate is similar to that of Manitoba generally. Summer frosts occur. Wood is the only fuel, and at present there is an abundant supply of it. Only boulder stones were seen, and these are to be had in nearly every section, but they are

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

not suitable for building purposes. There are some moose, elks, and jumping deer. Ducks are very plentiful in season. Very few partridges or prairie-chickens were seen. There are quite a number of muskrats and also a few minks and otters.—*P. T. C. Dumais, D.L.S., 1908.*

There are no trails in this township. It can, however, be easily reached by
30. boat from Fairford, on the east side of lake Manitoba, or from Winnipegosis, both of which places are served by railway (Canadian Northern railway). The soil in this township is good and it has a good clay subsoil. It is suitable for grazing and general farming. There is very little waste land and practically none is subject to flood from the lake or other causes. There is very little good hay land (natural), which is a real disadvantage to the settler for the first couple of years. However, the land is better than hay land, and so it will in the end prove an advantage. Practically the entire area is covered with poplar bush, some of which has been fire-killed. There is much of this bush that will make good cordwood, but at present it is doubtful if it could be marketed to yield a profit. However, conditions may change in a couple of years. The township is well watered as it is really only a narrow strip along the lake which would serve as a water supply if water could not be obtained inland. Section 36 appears dry, but good water no doubt could be obtained anywhere in fifteen- or thirty-foot wells; elsewhere it could be obtained in shallower wells. There is, of course, an abundance of wood for fuel for the settler. There is probably no other natural fuel supply. The peat of the extensive marshes farther north will probably be used sometime in the future. There are no stone-quarries. No valuable minerals were observed and probably none exist. There are a few glacial boulders here and there showing in the surface soil. These will probably be valuable in masonry building. The surface is quite level and even, but has sufficient fall for drainage. The climate is pleasant, but it will probably be subject to summer frosts until a great portion of the forest is cleared away. Two slight frosts were noted this season, but they were not severe enough to damage ordinary crops. It is possible that the presence of so large a body of open water may protect this land from these freak frosts which so often cause heavy losses to the early settlers. Game is still plentiful, moose, jumping deer, partridges and prairie-chickens being observed while surveying operations were being carried on. All the quarter-sections are quite close to the lake, and during the winter months, when farming operations are at a standstill, the settler will be able to make good wages by fishing. Whitefish, jackfish, pickerel and suckers are quite plentiful. This is a real advantage, for there is a keen demand for these fish. It is estimated that at least \$25,000 worth of fish was shipped from Fairford during the season of 1911-12. Garden island, situated along the north boundary of section 22, is probably fifteen acres in area. It derives its name from the fact that long ago the freighters used to plant a small garden here. They planted, attended to and reaped it as they passed and repassed the island. The island is marsh with a rim about twelve feet high around it, such as characterizes the banks of all the northern lakes where the land adjoining the shore is low and marshy. This rim is narrow in places and is wooded with poplar, oak and various undergrowth. The area which is suitable for garden is quite small, probably less than an acre.—*W. E. Taylor, D.L.S., 1912.*

(Sections 29 and 31.)—There is a very small quantity of small poplar timber in the northeast quarter of section 31. Sections 29 is mostly covered by lake Manitoba, the balance of the section being occupied by Garden island. This island has a fringe of timber all around its outer edge while the central part is marshy and wet. No trace of minerals was seen nor is there any timber of commercial value.—*A. Fawcett, D.L.S., 1912.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

There are no trails or roads leading to this township, but there is a portage trail across sections 11 and 12 which has not been used very much since the construction of railroads on either side of lake Manitoba. This township is most easily reached by boat from Fairford, a station on the Winnipeg to Gypsumville branch of the Canadian Northern railway. There is a considerable area of marsh land, but there are some quarter-sections which have very little waste land. The top-soil in places has been rather badly burned, but it is gradually recovering from this; it has a good white clay subsoil. In section 12 there is much open, dry land, but it is broken by marshes. The remainder of the township is covered with bush, except the marshes. Some of these marshes are worthless and grow a very thick, tall growth of wild rice and reeds. Good hay land is scarce, especially after a wet season or a season of high water in the lake, as many of these marshes along the shore are subject to flood. The land where it is good is suitable for mixed farming and grazing. In their present conditions sections 1 and 12 would be very easily cleared as the timber was fire-killed a few years ago and the young growth is quite small. There is no valuable timber. However, there is an abundance of fuel for the settler. The surface is quite level, and there are no hills or rock outcrops. There is an abundance of water as almost every section is in touch with the lake and, moreover, water can be obtained in shallow wells everywhere. There are no rivers or streams, except that in time of high water the water finds its way across the large marsh stretching through section 24, and section 18 of the township to the east. However, there is no open flow across here as the whole marsh is overgrown with reeds. The climate is pleasant, but it will probably be subject to summer frost until a great portion of the forest is cleared away. Two slight frosts were noted this season, but they were not severe enough to damage ordinary crops. It is possible that the presence of so large a body of open water may protect the land from these freak frosts which so often cause heavy losses to the early settlers. There are no stone-quarries in this township, but there are some glacial boulders scattered everywhere which will be useful for masonry building. No valuable minerals were observed and probably none exist. Game is plentiful, moose, jumping deer, partridges and prairie-chickens being observed while surveying operations were being carried on. All the quarter-sections are quite close to the lake and during the winter months when farming operations are at a standstill the settler will be able to make good wages by fishing. Whitefish, jackfish, pickerel and suckers are quite plentiful. This is a real advantage as there is a keen demand for these fish. It is estimated that at least \$25,000 worth of fish was shipped from Fairford during the season of 1911-12.—*W. E. Taylor, D.L.S., 1912.*

(*Partial.*)—Sections 5, 6, 7, 8, 17, 18, 19 and 30 are fractional sections and not suitable for farming, the greater part of this land being broken by muskeg, marshes and ponds of water. The timber is composed of poplar, birch, spruce, oak, ash and willow. There is some timber in section 10 up to fourteen inches in diameter, and also some along the west boundary of sections 6 and 7. The good timber in these sections has been taken off some years ago, and what is left is not of any commercial value. No trace of minerals was seen.—*A. Fawcett, D.L.S., 1912.*

(*North outline.*)—In this township the line crosses a series of large muskegs and swamps with low ridges covered with small poplar and willow. The soil is black loam overlying a clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—There are no trails in this township, but it may be reached by boat on lake Manitoba, probably more easily from the west of the lake than from the east. The soil is good, but it has been rather badly burned by some of the fires which burned the timber. It is now rapidly recovering from this and will make good farming land. It is suitable for grazing and general farming. It has a few large areas of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 12—*Continued.*

marsh land, but a large percentage of its area is good tillable land. The entire area, except water holes, marshes, etc., is covered with second-growth poplar. There is sufficient wood for fuel. The surface, in general, is very even and level, though slightly rolling in places. There appears to be sufficient fall for drainage, but there are some areas which are subject to flood from the lake and could only be obtained satisfactorily by lowering the lake. There is not much natural hay land. There was an abundance of fresh water to be had in shallow wells throughout the season, and no scarcity of water is likely to worry the incoming settler. The climate is pleasant, but will probably be subject to summer frosts until a large portion of the bush is removed. There were no summer frosts this season severe enough to damage ordinary crops, and possibly the presence of so large a body of open water protects it from any severe frost. No valuable minerals were observed and probably none exist. There is an outcrop of limestone in sections 12 and 13, also another in sections 24 and 25. There are some glacial boulders scattered over the entire area, and they will probably be of value to the settler for masonry buildings. Game is quite plentiful as yet, moose, jumping deer, rabbits, prairie-chickens and partridges being observed while surveying operations were being carried on. Fish are plentiful in lake Manitoba. A settler can make good wages by fishing in the lake throughout the winter months when farming operations are at a standstill.—*W. L. Taylor, D.L.S., 1912.*

RANGE 13.

- (*East and south outlines.*)—Along the eastern and southern boundaries is a
17. level prairie with numerous bluffs of poplar and willow. The soil is a sandy loam.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—The soil in this township is light sandy loam. The land, excepting two small gravel ridges, which run in a northwesterly direction across it, is level. The marshes produce good hay.—*J. McLatchie, D.L.S., 1872.*

- (*North and east outlines.*)—The country here is level prairie with many bluffs
18. of poplar and willow. The soil along the eastern boundary is a third-class sandy loam; that along the northern boundary is rated second-class. There is a small river running in an easterly direction through section 24. The water is clear and good.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—This township contains very little good farming land. The soil, with the exception of that on the marshy land, is principally light sandy loam. This township, being very low and level, is flooded with the water from Riding mountain. Nearly one-third of this township is marsh or hay land, and in the spring more than one-half of it is covered with water. The timber has been all killed by fire, and consequently is of no value except for fuel.—*J. McLatchie, D.L.S., 1872.*

- (*East and south outlines.*)—The surface along the former line is nearly all
19. covered with windfall, intermixed with a dense growth of young poplar, while that along the latter is an open prairie, with some willow brush and an occasional bluff of poplar. The land throughout is of good quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township, excepting the two southern tiers of sections is unfit for tillage. The soil, even in the marshes, is largely intermixed with gravel. The timber is chiefly poplar.—*H. Leber, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

(*North and east outlines.*)—The country along the north outline is alter-

20. nately poplar and red pine woods, muskeg and marsh. There are occasional small patches of spruce woods. Along the east outline the surface is nearly all covered with poplar and occasional spruce. There is a large marsh running parallel to this boundary through sections 1, 12 and 13. The land is rather sandy and of a second- and third-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—The soil of this township is stony and gravelly, and there are many groves of large-sized poplar, spruce and red pine, also a young growth of the same timber spread through the township. Owing to the numerous marshes and the gravelly nature of the soil, it is not well adapted to settlement.—*H. Leber, D.L.S., 1873.*

This township is level except the central part which is composed of sandy ridges; these unite at the northerly end and form an elevated plateau. The soil is black loam eight to ten inches deep with clay subsoil and sand on the plateau. In the southerly part wheat and oats do well, but I think the soil is too light to bear crops for many seasons without fertilizing. The easterly and westerly parts of the township are covered with a thick growth of poplar four to ten inches in diameter, while on the ridges there is a scattered growth of jackpine which is suitable only for fuel. Good water can easily be obtained at a depth of eight to ten feet. There are a number of sloughs and hay meadows in the westerly part around which large quantities of hay are cut. There are no minerals of economic value nor stone-quarries. The settlers are nearly all Galicians who are doing well, and no doubt in a few years will be in good circumstances. Small fruit, such as blueberries, grow in great profusion in the northerly central part of the township and are gathered in large quantities and marketed at Glenella from which point they are shipped to Winnipeg and Brandon. The settlers do quite a business in wood during the winter season having plenty of time which they spend in clearing the land and cutting the trees into cordwood. Small game, such as wild ducks and prairie-chickens, is plentiful, while moose and elks are in such numbers that most of the settlers are enabled to procure all that the game laws allow them. This township appears to be free from summer frosts and all kinds of garden vegetables do well and attain a great size.—*W. J. Deans, D.L.S., 1909.*

(*East outline.*)—Along this line the land is generally covered with poplar
21. and spruce woods, intermixed with willows. There are several marshes, covered mostly with willow.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—Two good trails reach this township from the south, coming from Glenella on the Canadian Northern railway. One enters section 1, and crossing northwesterly, leaves the township in section 35; the other enters at the southeast corner of section 5 and passes through the northwest corner of section 31, leading to Ste. Rose du Lac. These are good ridge trails and give easy access to other parts of the township. The soil is principally a sandy loam, more or less stony, and is suitable for mixed farming. The surface is nearly level, having some open swamps alternating with low ridges, and is covered with scrub and small timber except a strip about half a mile in width by four and one-half miles in length running from the northwest corner of the township to the centre of section 8. This strip is prairie and is one of the numerous old beaches of lake Manitoba. Every section has more or less small timber; the best and largest has already been lumbered, but from the remainder large quantities of cordwood and fence posts may be obtained. Most of the swamps are too wet to grow grasses fit for hay. All water is good and fresh, and is easily obtained by digging shallow wells. There are no streams. The climate during this summer

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

was hot and wet with no frosts. Large quantities of fuel are available from the dead and green poplar, and can be obtained in every section. No coal nor other minerals were observed. There is no rock suitable for quarries, but plenty of boulders may be obtained for foundations and buildings in every section. Moose, elks, jumping deer, rabbits, partridges, and prairie-chickens are very plentiful. High-bush cranberries and blueberries are found in this township.—*J. Francis, D.L.S., 1912.*

(*North and east outlines.*)—About one-half of the surface along the east boundary is an open marsh; the remaining half is covered with windfall and poplar woods intremixed with willow. Along the north there is alternately poplar woods, marsh and swamps. The latter is generally covered with a growth of tamarack and spruce. There is a gravel ridge in section 33, with a growth of oak, poplar and spruce. The land throughout is of third-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—This township may be reached on the west side by a trail from Glenella to Ste. Rose du Lac, and being on a ridge, the trail is fairly good at all times of the year. Another good trail from the south enters at the southwest corner of section 2 and runs northwesterly to the centre of the township where it terminates. The soil is either clay or sandy loam with many stony spots. The land when cleared will grow the usual Manitoba grains and grasses, but for the first settlers mixed farming would be more profitable. The surface is nearly level and consists of low, wide ridges alternating with shallow swamps. Sections 1 to 13, 16 to 19, 25, 30, 31, 35 and 36 are scrubby, while the remaining sections contain scattered poplar, spruce and tamarack sufficient to manufacture one and a half million feet of good lumber and to supply large quantities of cordwood and fence posts. Sections 21, 22, 23, 27, 28, 29, 32 and 33 contain poplar, spruce and tamarack from two to twelve inches in diameter. This will supply building logs and fuel for many settlers. The swamps are too wet for the growth of good hay, consequently hay is scarce and of poor quality. All water is fresh and good, and is easily obtained from shallow wells. There are no streams. No summer frosts were noticed between June 1st and September 20th. For fuel, either poplar, spruce or tamarack, both dead and green, are available in every section. There are no rock strata fit for stone-quarries, but many large boulders are found, especially in the western part of the township. No minerals were noticed. Elks, moose, jumping deer, rabbits, prairie-chickens and partridges were plentiful at the time of survey.—*J. Francis, D.L.S., 1912.*

(*East and south outlines.*)—Along the south outline the surface is slightly rolling and covered generally with poplar, spruce and tamarack woods, also with occasional hay and willow marshes. The land is gravelly in places, and the soil is of first- and second-class quality. The land along the east boundary is generally covered with poplar woods and scattered spruce. There are occasional hay and willow marshes. The soil is of first-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision, fractional.*)—From Makinak, on the Canadian Northern railway, there is a good road to this township. The soil, which is similar to that in the neighbouring townships, is fairly fit for cultivation, being clay, sand and gravel, covered with three to six inches of loam. The timber is chiefly fire-killed and standing poplar, with some green bluffs here and there and a second growth of poplar and willows. There are a few hay sloughs throughout the township. There are no water-powers, no quarries and no minerals of any description. Moose, elk and jumping deer are numerous. There are also great numbers of rabbits and a few partridges. Pike and whitefish are very plentiful in lake Manitoba.—*P. T. C. Dumais, D.L.S., 1906.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

This township may be reached either from Makinak, on the Canadian Northern railway main line, or by a branch of the Canadian Northern railway from Ochre river to Ste. Rose du Lac, a distance of twelve miles. From Makinak, there are stage connections the year round, three times a week, to Ste. Rose du Lac, thence to Ste. Amélie. Ste. Amélie is about the centre of township 23, range 14, and a good wagon trail runs from Ste. Amélie through the centre of township 23, range 13, thence easterly through township 23, range 12. This trail passes through a few muskegs and some timber, but it can be easily travelled by either wagon or sleigh, although it is very wet and soft in the spring. It is used to some extent in the winter as it connects with a mill in township 23, range 11, and also with an Indian reserve at the northeast corner of township 23, range 12. The soil in general is a dark loam of a depth of about three inches with a subsoil of clay and gravel. There are a number of gravel ridges and muskegs, and some of the muskegs are very wet and boggy. The township is mostly covered with scrub and fairly large scrub poplar and some boulders. The surface as a whole is rolling. Most of the large timber has been cut and the remainder has nearly all been killed by fire. It consists of poplar, spruce and tamarack. The poplar, for the most part, is small, averaging from ten to fourteen inches in diameter, with poplar, willow and rose underbrush. In the southern part of the township there are a few spruce and an odd tamarack, averaging from eight to sixteen inches in diameter, mostly killed by fire. The timber, as a whole, is of commercial value for cordwood, pulpwood and some perhaps for buildings. Hay of good quality is found in abundance in large marshes along bogs, which are fairly dry about the middle of July. Good water may be obtained in any of the marshes by digging a few feet. The climate is dry and hot in the daytime and cold at night. The wood forms an abundance of fuel for settlers in all parts. There are some large granite boulders and some limestone but no trace of minerals. Game is plentiful and consists of moose, elk, jumping deer, bears and coyotes. Rabbits, partridges and a few prairie-chickens are also to be found.—*A. Fawcett, D.L.S., 1912.*

(*North and east outlines.*)—The country along these lines is alternately
24. poplar woods and shallow marshes, with hay, reeds, rushes and willow. The soil is gravelly and of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—From Makinak station on the Canadian Northern railway, there are trails and good roads to Ste. Rose du Lac and Ste. Amélie. From this last place a wagon road continues farther east to the Indian reserve on Ebb and Flow lake and passes through the southern part of this township, which is at a distance of twenty-two miles from Makinak station. The subsoil is generally a mixture of clay, sand and gravel, with a few boulders here and there, and is covered with a surface of black loam of three to six inches in depth; according to the report of some settlers who are living on similar land, south of this township, this soil produces the best No. 1 hard wheat. The country is very level and is mostly covered with fire-killed standing poplar, willow, and scrub, the fire having passed through this country three or four years ago; however, there are still a few bunches of green poplar of good size, that can be utilized for building purposes. In the north part of section 9 there is a bluff of 150 to 200 green spruce with a diameter of thirteen to sixteen inches and as many fire-killed of less diameter and a small quantity of oak trees. A considerable quantity of good hay could be made in the numerous sloughs spread over this township, but it could be cut only in a dry season on account of the level surface of the country, which is liable to be flooded on its lower part by rain in the harvest season. The surface water is alkaline, but fresh water is obtained permanently by digging ten to twenty feet. There is no stream

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

worth mentioning. The climate is the same as that of central Manitoba and summer frosts may be feared. Any quantity of dry poplar can be obtained all over the township for fuel purposes. There are no water-powers, stone-quarries nor mineral. It is a good country for game. Moose, elks and jumping deer were numerous last fall; partridges and rabbits were abundant. There is no fishing.—*P. T. C. Dumais, D.L.S., 1904.*

25. The best route to reach this township would be from Makinak, a station on the Canadian Northern railway in township 23, range 16, by way of Ste. Rose du Lac, a village about twelve miles northeast of the station; from this village there is a good road as far as section 35, township 24, range 15; from here there is a trail which crosses township 25, range 14, and continues as far as Lonely lake in township 25, range 12. The soil in this township is a mixture of clay, sand and gravel, covered with black loam to the depth of about seven inches, and is suitable for agricultural purposes. The surface is very level and is chiefly covered with poplar and willows, the poplar averaging from six to ten inches in diameter. The greater part of this timber was killed by fire three or four years ago, but there are many bluffs of green poplar yet. Good hay could be procured in the numerous sloughs, all over this township, but it could be cut only in dry seasons on account of the level surface of the country, which is liable to be flooded on its lower part in a rainy season. Surface water is generally fresh, and a permanent supply could be obtained by digging from eight to ten feet. A creek, which was dry at the time of the survey, crosses sections 25 and 24, leaving the township in section 13. The south end of a lake, which extends for a few miles north, occupies a considerable portion of section 34. The land in the vicinity of this lake is swampy. A trail crosses this township from section 12 to section 34. Dry poplar for fuel is plentiful all over the township. There are no water-powers, stone-quarries nor minerals. Moose, elks and jumping deer were numerous last fall. Partridges and rabbits are abundant.—*P. T. C. Dumais, D.L.S., 1904.*

26. From Makinak, a station on the Canadian Northern railway, in township 23, range 16, there is a good road to East Bay and lake Dauphin, a distance of twenty-two miles. From this point there is a bush trail which runs about four miles due east, but for the remaining ten miles to the centre of this township we had to go through bush, slough and muskeg. The surface is covered with poplar, willow and a few scattered spruce, the poplar measuring up to twelve inches in diameter. The soil is a mixture of clay, sand and gravel covered with from four to six inches of black loam. The country is very level with many sloughs and muskegs. Both green and dry poplar, for fuel and fencing purposes, are plentiful. Tamarac lake (so called by Indians) is over three miles long and extends north and south, covering parts of sections 3, 10, 15 and 22. There are no water-powers, stone-quarries nor minerals. Moose, elks and jumping deer are numerous, and the country seems to be overrun with rabbits.—*P. T. C. Dumais, D.L.S., 1906.*

(*Subdivision.*)—The only land in this township adapted to agriculture is in the two western ranges of sections where the soil is of good quality. In the remainder of the township the sloughs are too numerous and wet to admit of farming to any extent. The land that is dry has such a slight elevation above the sloughs that it will be impossible to drain it. There are no running streams and no natural drainage. This township would make a first-class cattle or horse ranch. Hundreds of tons of good hay can be had at present, and many more if the meadows were cleared of the willows. Wild pea-vine is found nearly everywhere on the dry land. As to timber, there are only a few bluffs of small poplar. Where the surface is not occupied by open meadows or sloughs

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

it is all thickly covered with poplar, willows and hazel scrub.—*J. Dickson, D.L.S., 1898.*

27. Makinak, a small town on the Canadian Northern railway, in township 23, range 16, is the most convenient railroad point from which to reach this township. The soil consists of a few inches of loam over a subsoil of hard-pan clay, gravel or boulders. A large area of this township is marsh or wet hay slough. If the country were properly drained, stock-raising could be carried on in a small way, but the country is so low and flat, being in no place more than a few feet above the level of lake Manitoba, that draining would be a difficult and expensive undertaking. As it is at present, it would be impracticable to farm in any way, except in very dry seasons. Some years ago, a settler located in section 29, and for a few years tried stock-raising, but on account of the dampness of the country abandoned the attempt and moved elsewhere. There is no land which could properly be called prairie here. There are a few small areas of open country which are caused by repeated fires destroying the surface soil and leaving the ground so poor that nothing grows except some miserable grasses and stunted scrub. About one-third of this township is marsh, open water and wet hay slough; the remainder is covered with poplar, willow and scrub. In section 14 there is a bluff of excellent poplar covering an area of seventy or eighty acres. The trees in this bluff run from eight to eighteen inches, and are long and clean in the trunk, making excellent building material. At one time there was considerable large poplar, but fires have destroyed this. At present there is plenty of poplar large enough for firewood, with a few green scrubby spruce. There are quite a number of hay sloughs, and in dry seasons a large quantity of excellent hay could be cut. There is an excess of water, most of it of a fairly good quality. The water in the marshes, muskegs and sloughs is hard. There is no doubt that water could be had in any part of this township by digging shallow wells. There are no streams nor water-powers. The climate is similar to that of Manitoba generally. Wood is the only fuel and at present there is an abundant supply. No stone except boulders were seen; these are found in nearly every section, but they are not suitable for building purposes. No indications of minerals were observed. There are some moose, elks and jumping deer. There are quite a number of muskrats and minks. Many coyotes were seen. Partridges, prairie-chickens and rabbits were scarce.—*P. T. C. Dumais, D.L.S., 1907.*

(*North outline.*)—The line crosses much marsh and muskeg, but there is a larger proportion of bush than in range 14 and the timber is also larger, poplar up to eight inches in diameter being found. Crane river crosses the line in section 31, flowing north into Crane bay. On both sides of the river there is a strip of marshy land and close to the river banks are tall reeds. A lake half a mile in width and surrounded by a reedy marsh is also crossed in section 31. The soil in this range is chiefly black loam on a subsoil of clay.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—Makinak, a small town on the Canadian Northern railway, in township 23, range 16, is the most convenient railroad point from which to reach this township. With the exception of a portion of sections 6, 7 and 18, the soil in this township is a few inches of loam over a subsoil of hard-pan, clay, gravel or boulders. About one-quarter of the area is marsh and slough. If properly drained and roads opened giving access to the railroad, mixed farming in a small way could be carried on. The country is so flat that it would be a difficult and expensive undertaking to drain it. There is no prairie. The timber consists of poplar, very little of which is large enough for building purposes, with willow and scrub. The most extensive marshes are in the centre and southerly portions of the township. The sloughs are

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

mostly of a marshy character and are fairly well distributed. A large quantity of wild hay could be cut in dry seasons. There are a number of hay sloughs, and some hay might be cut around the marshes. Along the valley of Crane river through sections 8, 7 and 18 there are excellent hay meadows. The water in the marshes, muskegs and sloughs is moderately hard. Crane river flows out of the large marsh to the north of Primes lake through sections 8, 7, 18, 19, 30 and 31. The water in this stream is of excellent quality. It is from twenty-five to thirty-five feet wide and has an average depth of from twelve to twenty inches, with a current of about three miles per hour. There are excellent hay meadows along this stream, but they are subject to flooding. In high water the depth of this stream, in the main channel, would be five or six feet, and on account of low banks, the water would spread over the meadows. There are no water-powers. The climate is similar to that of Manitoba generally. Summer frosts are liable to occur. Wood is the only fuel and at present there is an abundant supply of it. No stone other than boulders were seen. These are found in nearly every section, but they are not suitable for building purposes. No indications of minerals were observed. There are some moose, elks and jumping deer. There are quite a number of prairie-wolves and also some muskrats and minks. Rabbits, prairie-chickens and partridges are rather scarce.—*P. T. C. Dumais, D.L.S., 1907.*

Makinak, a station on the Canadian Northern railway, in township 23, **29 & 30.** range 16, is the nearest railway point to these townships. There is a good wagon road from this station to Ste. Rose du Lac, a distance of twelve miles. From here a trail runs in an easterly direction, joining the Crane River I. R. trail in township 24, range 12. This latter trail has a northerly course, and enters township 29 in section 5. It is a poor, wet trail, except in a very dry season. There is very little good land in these townships. The soil consists of a few inches of loam over a subsoil of hard-pan, gravel or boulders. It is most suitable for mixed farming. The land is very flat and is in no place more than a few feet higher than the surface of lake Manitoba. About one-half the area of these townships is marsh or hay slough, and the remainder is wooded with small poplar, willow and scrub. In township 29, there is considerable spruce and poplar suitable for building logs and lumber. Fires have killed a lot of this, but the standing trees are still sound. There are a great number of hay sloughs from which a good quality of hay can be cut. These hay sloughs are fairly well distributed, but the best are found in that part of township 29, west of Crane river. The Indians from the Crane River reserve have been cutting hay in sections 5, 6, 7 and 8, of township 29. A considerable quantity has also been cut in sections 29, 30 and 31. Township 30 is of very little value except for what hay can be cut. There is altogether too much water in these townships. It is somewhat hard but otherwise of fairly good quality. There is only one stream, Crane river, which flows through township 29 and empties into Crane bay in section 29. It is a sluggish stream with wide marshy shores. The small sail-boats used for fishing purposes can be worked upstream as far as Crane lake. A considerable quantity of fish, consisting of carp and pike, is taken out of this river and Crane lake. There are no water-powers. The climate is similar to that of Manitoba generally. Summer frosts are liable to occur, although excellent potatoes have been grown. Wood is the only fuel, and at present there is an abundant supply of it. Boulders are found in nearly every section, but they are not suitable for building purposes. No indications of minerals were seen. There are some moose, elks, and jumping deer, and an abundance of ducks in season. Very few partridges or prairie-chickens were seen. There are quite a number of muskrats, with some minks and otters.—*P. T. C. Dumais, D.L.S., 1908.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 13—*Continued.*

This township is largely occupied by lake Manitoba, and the remainder is so flat and low as to be unsuitable for farming purposes. In sections 23 and 26 there is a long, narrow island which has a small fringe of timber, while the central part is marshy and wet. Sections 34 and 35 have a small quantity of small timber, but none of any value. There is not enough land in this township to make it of any commercial value, except for its fishing industry.—*A. Fawcett, D.L.S., 1912.*

This township may be reached more easily from Winnipegosis in the summer season than by any other route. The Canadian Northern railway maintains a thrice-a-week service from Dauphin to Winnipegosis. The route from Winnipegosis is across lake Winnipegosis to Waterhen lake, thence southerly down Waterhen river to lake Manitoba and thence in an easterly direction to township 31, range 13. This township is partly surrounded by water and contains a small lake in the central portion. There is no large timber, it being all of a scrubby nature from two to four inches in diameter and consisting of poplar, willow and a few small spruce, tamarack and oak; there is not enough wood to supply the needs of settlers. A large portion of this township is occupied by lake Manitoba, large bogs and ponds of water from two to four feet in depth. There are small patches of fairly good land between the muskegs. Sections 5, 6, 7, 18, 19 and 30, and parts of sections 31, 32, 29, 20, 17, 8, 35, 36, 26, 25, 24, 23, 13, 12, 11, 1 and 2 are covered by lake Manitoba. Sections 28, 21, 16 and 9 are made fractional by a lake. Sections 27, 22, 15 and 10 are crossed by a large bog. This bog is covered with long grass and rushes, and has numerous small pools of water from two to four feet in depth. Game is plentiful and consists of elks, moose, jumping deer, rabbits, muskrats, mink, skunks, partridges, ducks, geese, and prairie-chickens. Fish are also plentiful. There are no mineral outcrops in this township.—*A. Fawcett, D.L.S., 1912.*

(*North outline.*)—In this township the line passes through low country consisting of low ridges covered with poplar and willow, separating large muskegs and hay sloughs. In sections 35 and 36 the line crosses a bay of lake Manitoba. Boggy creek flows into lake Manitoba from the north in section 35. In sections 33 and 34, the line crosses Proulx lake. This lake is about four miles in length from north to south and the greater part of it lies in township 33. The soil in this range is chiefly black loam on a clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township may be reached by way of Winnipegosis easier than by any other route. The Canadian Northern railway maintains a thrice-a-week service from Dauphin to Winnipegosis. The route from Winnipegosis is across lake Winnipegosis to Waterhen lake and thence down Waterhen river to lake Manitoba which cuts into this township on either side. There is no large timber, it being mostly scrub poplar and willow with a few spruce and tamarack. The central portion of this township is broken by muskegs, small lakes and ponds. The land on either side of the muskeg is good, but it contains many small ponds of water. Parts of sections 1, 2, 12, 13, 14, 23, 26, 36, 35, 24, 6, 7, and 18 lie in lake Manitoba. Sections 33, 34, 28, 27, 21, 22, 16, 15, 9, 10, 4, 3, 11 and 32 are mostly muskeg and marsh which is very difficult to cross on account of the miry bottom. An abundance of hay grows around the edge of these marshes. The remaining sections are covered principally with small timber. There is no trace of minerals in this township. Game is plentiful, consisting of moose, elks, jumping deer, some caribou with many rabbits, partridges, ducks, geese and prairie-chickens. Fish are plentiful in lake Manitoba.—*A. Fawcett, D.L.S., 1912.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 14.

The westerly half of this township contains some excellent farming land and
17. is nearly all covered with rose and willow bushes and small poplar. The eastern portion of the township is intersected with small gravel ridges. The soil is a light and sandy loam. This portion of the township has no timber of any value, except for fuel. A large marsh is formed near the centre of the township by the spreading out of the waters of two large streams flowing eastward from the Riding mountains. These streams supply an abundance of excellent water and portions of the marshy land produce an excellent growth of hay. Building timber can be obtained at a distance of about two miles.—*J. McLatchie, D.L.S., 1872.*

Nearly one-fourth of this township is marsh or hay land. The soil is a light
18. sandy loam. Excepting a few gravel ridges in the west half, the land is very low and level and about one-half of the township is flooded in the spring by the waters of several streams from the Riding mountains which pass through it. A large portion of the marshy land produces a rank growth of hay. The timber except that in sections 6, 7, and 18, has been destroyed by fire.—*J. McLatchie, D.L.S., 1872.*

(*South outline.*)—The country along this line is prairie with some willows and
19. occasional bluffs of poplar. The soil is good, and of second-class quality.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—The surface of this township consists almost entirely of marshes and muskegs, excepting the tier of sections adjoining the southern line. The hay in these marshes is of excellent quality and of great abundance. There are groves of good poplar scattered through the township and also a few patches of very good oak. The soil is chiefly gravelly, which, with the marshes, renders the township almost altogether unfit for agricultural purposes.—*H. Leber, D.L.S., 1873.*

(*North outline.*)—For the most part this boundary is covered with heavy
20. poplar woods. There are numerous marshes which are covered, in many places, with willow. There is a small stream one chain wide and five feet deep, flowing northerly through section 32.—*E. Bray, D.L.S., 1873.*

(*Subdivision.*)—One-half of the surface of this township consists of swamps, the bottoms of which are gravelly and stony, the depth varying from two to six feet. The remaining portion is covered with willow brush and poplar timber of inferior quality. The township is unfit for settlement.—*H. Leber, D.L.S., 1873.*

This township is low and wet, nearly one-half being covered by lakes and
21. muskegs. The timber consists of poplar, balm of Gilead, spruce and oak from four to twelve inches in diameter. The soil of the timbered portion is good, but not first-rate.—*W. C. Eaton, D.L.S., 1873.*

When the muskegs are drained the good quality of the soil and the nearness to the railway will make this township very valuable as farm land.—*G. A. Bennett, D.L.S., 1912.*

(*North outline.*)—The country along this line is covered with poplar woods
22. and occasional patches of willow marsh. The land is gravelly or sandy, and is of third-class quality. There is a small stream flowing northerly through section 33.—*E. Bray D.L.S., 1873.*

(*Subdivision.*)—The soil, timber and surface are similar to those in the township to the south.—*W. C. Eaton, D.L.S., 1872.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 14—*Continued.*

(*South outline.*)—Along this line the surface is slightly rolling and nearly

23. all covered with small poplar, spruce and tamarack with occasional open glades of prairie, hay and willow marshes. There is a small creek running northerly through section 3. The soil is of first-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—The part surveyed in this township, that is the western part, may be described as a scrubby country well adapted to farming purposes. The soil is a sandy loam with a sandy subsoil and may be rated as first- and second-class land. Some settlers took up land during the time of survey. A stream of good water runs across the western part of the township.—*P. R. A. Belanger, D.L.S., 1895.*

(*North outline.*)—The country traversed by this line is alternately poplar

24. woods and shallow marshes, with hay, reeds, rushes and willows. The soil is of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—The two western rows of sections, the only part surveyed in this township, are partly open and would offer some advantage for immediate settlement. The soil in this part is fair. The remainder of the township is bush or heavy second growth with windfalls interspersed with swamps and, as the soil is stony and gravelly, will never be fit, even when cleared, for anything but grazing. Sections 6 and 18 were partly taken up by settlers.—*P. R. A. Belanger, D.L.S., 1895.*

From Makinak station on the Canadian Northern railway there are good roads going northeast to Ste. Rose du Lac, a distance of twelve miles, and from this last place the trail to Manitoba House passes through sections 3, 2, 11 and 12 of this township. The subsoil is generally a mixture of clay, sand and gravel and is covered with a surface of black loam varying from three to six inches in depth. According to the report of settlers, who are living on similar land south of this township, this quality of soil produces the best No. 1 hard wheat. The surface of this country is very level and is mostly covered with fire-killed standing poplars, willows and scrub, the fire having passed through this country three to four years ago; however, there are still a few bunches of green poplar of good size which can be utilized for building and fencing purposes. There would be a considerable quantity of fairly good hay which could be cut in the numerous sloughs through this township, but on account of the level surface of the country it would require a rather dry season to harvest the hay with advantage, because the low lands are flooded when the season is wet. On the south part of the township the surface water is alkaline, but permanent fresh water may be obtained at a depth of ten or fifteen feet. The climate is generally the same as in central Manitoba; summer frosts may be feared in newly cleared land close to the bush. Dry poplars are plentiful for fuel purposes all over the township. There are no water-powers, quarries nor minerals. Moose, elks, jumping deer, partridges and rabbits are the game of the country; a certain quantity of moose and elks were killed last fall.—*P. T. C. Dumais, D.L.S., 1904.*

The best route to reach this township is from Makinak on the Canadian

25. Northern railway to Ste. Rose du Lac, a small village with an R. C. church, convent, post office, three stores and one hotel, at a distance of twelve miles in a northeast direction. From this village, there is a good trail as far as section 35, township 24, range 15, from where we had to travel on a winter hay road, which extends as far as section 16, a distance of about ten miles from Ste. Rose du Lac. The soil in this township is a mixture of clay, sand and gravel covered with six to eight inches of black loam, and will be suitable for agriculture after the land has been cleared, as has been done in township 23, range 13, where the soil is similar and

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 14—*Continued.*

praised by the settlers, who are homesteaders in that township. The surface is very level and is covered with poplar and willows, the poplar averaging from six to fourteen inches in diameter. A few scattered spruce of small size were seen in sections 1, 32, 33, 35 and 36. Good hay could be secured in the numerous sloughs all over this township, but it could be cut only in a very dry season on account of the level surface of the country, which is liable to be flooded on its lower part should it rain in the harvest season. The surface water is generally fresh and could be obtained permanently by digging six to eight feet. There is no important stream in this township. The climate is the same as in central Manitoba and summer frosts may be feared. Any quantity of dry poplar can be obtained for fuel purposes all over the township. There are no stone-quarries, minerals nor water-powers in this township. It is a good country for game. Moose, elks and jumping deer were numerous last fall. Partridges and especially rabbits are abundant.—*P. T. C. Dumais, D.L.S., 1904.*

From Makinak station on the Canadian Northern railway, there is a good
26. road to East Bay post office situated in section 18, township 26, range 15. Thence going east there is a bush trail for about three miles, but from there we had to cut a road as far as range 13. The soil in this township is a mixture of clay, sand and gravel, with four to six inches of black loam on top. There is no prairie, but there are many hay sloughs and muskegs and much swamp land. The remainder of the township is covered with poplar running up to ten inches in diameter, and willow scrub and some small scattered spruce in the north sections. The country is very level, except in the north where it is gently undulating. Good hay can be made in the numerous sloughs, but it can be cut only in dry seasons. The surface water is generally a little alkaline, but we found good fresh water by digging four or five feet. There were no indications of summer frosts. Green and dry poplar is plentiful all over the township and could be used for fuel, for small buildings and for fencing. There are no water-powers, no quarries and no minerals in this township. Moose, elks and jumping deer were frequently seen during the survey. Rabbits are very numerous.—*P. T. C. Dumais, D.L.S., 1906.*

The most convenient route for reaching this township is from East Bay post-
27. office by way of Makinak on the Canadian Northern railway. A road leads through township 27, range 15, about four miles west of this township and a trail from this road enters the township near the south boundary of section 19 and runs easterly. The soil varies from a dark clay loam to clay and gravel mixed with stones. About one-sixth of this township is waste land, the surface being very flat with the result that there are many marshes and sloughs. This renders it unfit for farming to a great extent unless drained. This township is most valuable for its timber; there is a considerable area covered by poplar from three to sixteen inches in diameter and scattered spruce fit for lumber. There are some good hay meadows but at present they are covered with water. It is said that this year was exceptionally wet and more water than usual is on these meadows. There are many salt springs and ponds as well as fresh-water marshes and sloughs. The climate this winter was exceedingly fine and snow fell to the depth of about two and a half feet in the bush. Of the economic minerals, limestone was the only one observed and that only in drift boulders. Game is plentiful, consisting of rabbits, muskrats, prairie-chickens, partridges, ducks and geese. Moose, elks and jumping deer are quite numerous, also small wolves and foxes. There are no settlers in this township.—*A. Fawcett, D.L.S., 1907.*

(*North outline.*)—In this township the line crosses low swampy land partly
28. covered with poplar and willow scrub but is chiefly open swamps and patches of prairie. At the time the survey was made (June) owing to the late spring

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 14—*Continued.*

and unusual depth of snow during the previous winter, the land was much wetter than it would be in an ordinary season and much of the land which at that time was under water would during an ordinary year, be excellent hay or grazing land. The soil is principally black loam to a depth of from eight to twelve inches on a clay subsoil. In a few places however the subsoil is gravel. This should be an excellent place for stock-raising as there is sufficient pasture land and an abundance of hay.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—The most convenient route for reaching this township is from East Bay post office by way of Makinak on the Canadian Northern railway. A trail passes through township 27, about two miles south of the south boundary of township 28, which makes it easy to reach this township in a dry season. The soil varies from a dark clay loam to clay and gravel, mixed with stone. About one-fifth of the township is waste owing to the level nature of the country. There are many marshes and sloughs, which render it unfit for farming, to a great extent, until drained. There is a small stream called Crane river, which enters the township on the east boundary of section 25 and flows northerly across section 36; this stream is about thirty links wide, five feet in depth and contains good water. There is considerable poplar timber in this township suitable for cordwood, and some lumber timber varying from three to twelve inches in diameter. There are some good hay meadows, but at present they are mostly covered with water, it is said that this year has been exceedingly wet and more water than usual is on these meadows. There are many salt springs and ponds as well as fresh-water marshes and sloughs. The climate this winter was exceptionally fine; the snow was about thirty inches deep in the bush. Limestone in the nature of drift boulders, was the only rock observed. Game is plentiful, consisting of moose, elks, jumping deer, small foxes and wolves, rabbits, muskrats, partridges, prairie-chickens, ducks and geese. There are no settlers in this township.—*A. Fawcett, D.L.S., 1907.*

The most direct route to this township is by way of Winnipegosis on the
29. Canadian Northern railway. There is a wagon trail from this station to the Crane River Indian reserve, which passes through this township. The soil in the township varies from clay loam to clay, sand, stone and gravel. About one-fifth of this township is waste land owing to the level nature of the country. There is considerable bush in the township but it is of inferior quality, being small and scrubby and fit only for fence rails and fuel. There are several hay meadows, sloughs and ponds which at the present time (February) are covered with water. There are many salt springs and ponds as well as fresh-water marshes and sloughs. The settlers state that this season has been exceedingly wet and more water than usual is on these meadows. Crane river, a small stream, flows through section 1 into lake Manitoba. The climate this winter was very fine, bad weather lasting for only one day. Snow fell to a depth of two and a half feet. Limestone in the shape of drift boulders was the only mineral of economic value observed. Game is very plentiful, consisting of moose, elks, jumping deer, also some black bear, small wolves and foxes. Rabbits, muskrats, minks, prairie-chickens, ducks and geese are found in season. There are no settlers in this township.—*A. Fawcett, D.L.S., 1907.*

The most convenient route for reaching this township is by way of Winni-
30. pegosis, a station on the Canadian Northern railway, from which place there is a wagon trail to the Crane River Indian reserve, which passes a little more than a mile south of the south boundary of the township. The soil varies from a dark loam to clay and gravel and stone. About one-quarter of the township is waste land owing to the level nature of the country. There are a good many marshes, ponds and

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 14—*Continued.*

sloughs, which render it unsuitable for farming purposes. There are some salt springs and ponds as well as fresh-water marshes and sloughs. The water is alkaline in some ponds. Along the shore of lake Manitoba are some good hay meadows. There is considerable poplar, suitable for cordwood and some scattered oak, spruce and tamarack. The weather was exceedingly fine and snow fell to the depth of thirty inches in the bush during the winter. Of the economic minerals, limestone was the only one observed and that only in drift. Game is plentiful, consisting of moose, elks, jumping deer, small wolves, foxes, rabbits and muskrats. The rabbits are not so numerous as formerly. There are partridges, prairie-chickens, ducks and geese in season. Fish of many varieties are found in lake Manitoba. There is one settler in this township in the northeast quarter of section 12.—*A. Fawcett, D.L.S., 1907.*

The most convenient route to this township is by way of Winnipegosis, on the
31. Canadian Northern railway. There is a wagon trail from Winnipegosis to Crane River Indian reserve which passes through township 29, about seven miles to the south of the south boundary of the township. The land is not of much value, as the timber is mostly poplar and willow scrub, with an occasional spruce tree. The township is too broken for farming, with marshes and sloughs, and is mostly covered by lake Manitoba. The soil is of good quality being a dark clay loam to clay and gravel mixed with stone. Game is plentiful, consisting of moose, elks, jumping deer, small wolves, foxes, partridges, minks, muskrats, and fish in great variety. No minerals were observed. There are no settlers in this township.—*A. Fawcett, D.L.S., 1907.*

(*North outline.*)—In this township the line crosses a series of low ridges
32. covered with poplar and willow, separated by large muskegs, swamps and hay marshes. Some *brulé* is met with on the north boundary of section 33. On the north boundary of section 31 the east shore of lake Manitoba is reached. The north end of the lake extends about a mile north of the line. The soil is black loam on clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—This township is situated at the north end of lake Manitoba and can be reached by boat, either from Westbourne, Gypsumville or any other port on the lake or from Winnipegosis by way of lake Winnipegosis, Waterhen river and lake Manitoba. Navigation in this part of lake Manitoba is dangerous for any but the smallest boats as the lake abounds in reefs and hidden rocks and is very shallow. At present there are no trails running through this township. The surface is largely marshes and muskegs which extend for many miles from the bays of lake Manitoba. Between these marshes are ridges of black loam and clay, covered for the most part with small poplar and willows. The only timber of commercial importance is in the eastern half of section 27, where there is about 500,000 feet of spruce running from eight to eighteen inches in diameter on the stump. Hay is abundant all over this township, as not only the marshes but the ridges as well are covered with a heavy growth of grass. However, the larger marshes are too soft to permit the use of machinery in haying; many of them, indeed, cannot be crossed by horses or cattle. In its present condition this township is suited to a limited extent for stock-raising and mixed farming. If it were drained there is no doubt that large quantities of cereals and other products of the farm could be produced here as in other parts of Manitoba. Water is abundant and uniformly fresh and good. There are no streams nor water-powers. From its general indications the climate is similar to that of other parts of northern Manitoba, but it was noticed this year that the rainfall in this district was not as heavy as in the vicinity of Winnipegosis. No summer frosts were noticed. Wood, which can be obtained in every section of this township, is the only

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 14—*Continued.*

fuel available. No lignite or coal veins, stone-quarries nor minerals of economic value were noticed. Game is very abundant. Moose are exceedingly plentiful; while elk, deer, caribou and bears are found less frequently. Partridges, prairie-chickens, ducks of many kinds, geese and the smaller fur-bearing animals are everywhere plentiful. Lake Manitoba abounds with whitefish, pickerel, pike and mullet.—*P. E. Palmer, D.L.S., 1912.*

RANGE 15.

(*East outline.*)—This boundary is prairie in places, but is mostly wooded
17. with ash, maple, poplar, oak and thick willows. The soil is an excellent sandy loam of first-class quality. There is a large creek with a swift current and good water running through section 13.—*J. McLatchie, D.L.S., 1872.*

(*South outline.*)—The land along this boundary is generally adapted to cultivation; it is mostly prairie, with occasional bluffs of poplar and small brush. The soil is a sandy loam with gravel and boulders in places.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—The two eastern tiers of sections are low, generally wet and covered with a dense thicket of alder and willow. The soil is rich and deep. In the third tier of sections the Riding mountains begin to rise with a steep incline for about half a mile, on the crest of which is a plateau generally rising towards the west for about one mile and a half, where another steep incline occurs. The western part is intersected by tortuous and rugged ravines averaging from 400 to 600 feet deep, at the bottom of which run rapid and never-failing streams of good water. The soil of the mountains is very thin, not averaging more than four inches in depth; it is a fine, rich, vegetable mould with a subsoil of shale and gravel. The plateaux have a rolling surface, and are thickly timbered with valuable poplar, ash and oak. The township is, on the whole, better suited for lumbering than agricultural purposes.—*C. J. Bouchette, D.L.S., 1873.*

(*North and east outlines.*)—The country along these lines is nearly all
18. wooded with poplar, willow and a few scattered oak and maple. There are occasional openings of fine prairie. On the east the soil is of second-class quality; and along the north is first-class.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—The soil, timber and surface are similar to those in the township to the south.—*C. J. Bouchette, D.L.S., 1873.*

The Neepawa-McCreary branch of the Canadian Northern railway crosses this township from north to south near the central meridian. Along part of this meridian there is a good municipal or local wagon road forming a section of the highway from Dauphin to Neepawa. The soil of the township is black or clay loam with clay or shale subsoil, and will be suitable for the growing of good grain when drains are made to tap the many creeks flowing through the adjacent hills. The surface in the east half is generally level, inclined to be swampy from the overflow and spreading of the waters of the numerous creeks. It is covered with a heavy growth of grass and bunches of willow mixed with poplar where not drained, cleared or cultivated. The west half, lying on the east slope of the Riding mountains, consists of gently sloping or nearly level benches with alternating slopes, not too steep to be cultivated, except along the western boundary, which is intersected by some deep ravines. This half was well timbered at one time but is now burnt and cut over, leaving only timber for cordwood and some scrub oak for fence posts. Second-growth scrub, principally hazel and poplar, is fast growing over the burnt places. Swamp hay grows in many places in the eastern part of the township, but is not of good quality in wet seasons.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Continued.*

The water is fresh and good as many of the creeks are fed by springs. None of the creeks have a sufficient and permanent supply of water to develop water-power. This township is seldom visited by summer frosts as it lies under the shelter of the Riding mountains. There is a large supply of poplar and birch wood fit for fuel in every section in the west half of the township. No rock except shale was observed, from which natural gas or petroleum might possibly be obtained by boring. No other minerals are known to exist. Boulder stones may be obtained in many of the sections. Prairie-chickens are plentiful, but no other game is to be found. This township is all taken up with English-speaking settlers mostly from Ontario and the older parts of Manitoba. Many of the quarter-sections in the eastern half are to some extent cultivated, but this part needs draining very badly. The west half has very little under cultivation as yet, but beginnings at settlement are made in nearly every quarter section. The village and station of Riding Mountain are situated in the northwest quarter of section 10. It affords a good shipping point for the large quantities of cordwood still remaining in the township.—*J. Francis, D.L.S., 1909.*

(*East and south outlines.*)—The four southern sections along the eastern boundary are prairie land, with occasional bluffs of poplar intermixed with willow. Sections 25 and 36 are marsh, covered with willows. Along the southern boundary the land is nearly all timbered, excepting sections 1 and 2. There is a range of hills extending over sections 4, 5 and 6. The soil is a black loam. A large creek flows through section 4.—*J. L. Reid, D.L.S., 1873.*

(*Subdivision.*)—This township is well wooded with cottonwood, birch, spruce and willow. The southwesterly part (being the base of Riding mountain) is rough and broken, cut up by many ravines, some of which are from 200 to 300 feet in depth. Good water can be obtained from many small streams. In the westerly part the soil is very shallow, while in the east a sandy soil prevails.—*W. C. Eaton, D.L.S., 1873.*

This township is traversed from north to south through the eastern part by the Canadian Northern railway; a good road runs along the railway. The soil is a black or clay loam with a clay and sometimes shale subsoil. The best timber has been burnt or cut and the district is now covered with hazel or scrub where not cultivated. In the western part there is an abundance of poplar, birch and oak which would be suitable only for fencing and cordwood. As this township is on the eastern slope of Riding mountain it consists of gradual sloping bench lands that could very easily be drained and when drained will make the district very suitable for agricultural purposes. Numerous small creeks of good fresh water open out into swamps on the level lands; these swamps afford a growth of coarse hay and willows. The two eastern tiers of sections are mostly cultivated, grain growing being the chief occupation of the settlers. No coal or lignite veins nor stone-quarries were seen. Moose, elks, and jumping deer constitute the game. The station of Kelwood is located in the northwest quarter of section 2 and the siding of Norgate, which is used chiefly for shipping cordwood, is situated on the north side of section 34.—*J. Francis, D.L.S., 1909.*

(*North and east outlines.*)—The country along these lines is mostly all a willow marsh with an occasional patch of prairie or dry land, covered with poplar. The land is of third-class quality.—*J. L. Reid, D.L.S., 1873.*

(*Subdivision.*)—The soil is a sandy loam with a few gravel ridges; there are many streams of good pure water. It is well wooded with poplar, cottonwood, spruce, elm and oak, also willow in abundance.—*W. C. Eaton, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Continued.*

This township is more than half marsh and muskeg, the southwesterly quarter may be classed all swamp and muskeg, the northeasterly quarter all muskeg. A dry ridge of fair soil extends from the southeasterly angle to about the middle of the north boundary. This ridge is from one to three miles wide, and separates two vast muskegs containing the waters of the two main branches of Turtle river. The ridge is thickly covered with poplar.—*J. Doupe, D.L.S., 1873.*

This township consists of stretches of open land interspersed with bluffs or belts of timber; recent fires have lately cleared a great deal of this township. Turtle river, a stream of good fresh water, flows northerly through the township and as it flows through some of the large swamps, is the cause of most of the surplus water, but this could easily be disposed of by a little drainage. The soil is a sandy black loam about twelve inches in depth with a clay or sandy subsoil and, where tilled, produces very good crops of vegetables and oats. The land in this township is somewhat higher than that in the township to the south so I see no reason why wheat should not be grown successfully. There is a good supply of gravel that would be useful for construction of roads and the underlying subsoil frequently shows traces of iron and mica. Some of the timber, which is mostly poplar, is large enough for building and the fallen timber—results of fires—would furnish an abundance of fuel. The township is especially well adapted to stock-raising as there is abundance of good hay and grass and plenty of good shelter.—*R. Bourne D.L.S., 1893.*

22. This township has many large muskegs and numerous small wet marshes. The intervening land is covered with a thick growth of poplar and small brush. The two branches of Turtle river enter the township from the south and unite in the northeastern quarter. This river has an average width of about one and one-quarter chains and a depth of one foot, a strong current, a stony bottom, and steep banks of twelve to fifteen feet in height. Where the land is dry, the soil is of first- and second-class quality.—*J. Doupe, D.L.S., 1873.*

This township is occupied by open stretches covered with light brush and interspersed with patches or strips of timber. Recent fires have left the southern and western parts practically open. Several large marshes are scattered over the surface of the township; in these there is a small amount of timber and often some very good hay. The soil is a black loam often mixed with sand with a clay or sand subsoil. The common vegetables and grain are easily grown here. The depth of the river channels below the surface will allow the soil to be very easily drained. There is a good supply of gravel for the construction of roads. The larger timber is poplar of which there is enough for building purposes; the smaller timber affords good fuel. As there is good hay in the marshes and a plentiful supply of good water this district is very well adapted to stock-raising.—*R. Bourne, D.L.S., 1893.*

(East outline.)—Sections 1, 12, 13 and 24 are covered with heavy poplar woods and an occasional willow and grassy marsh; sections 25 and 36 are prairie, with small willow bushes and scattered bluffs of poplar. The soil throughout is of second-class quality.—*E. Bray, D.L.S., 1875.*

(Subdivision.)—Turtle river flows through this township, through an alluvial plain with a clay subsoil. The river averages one chain in width, with banks about ten feet in height. There are numerous rapids; the water is good, and affords a never-failing supply. In sections 8 and 18 there are some fine groves of poplar, but none of the trees measure more than five inches in diameter. There are a number of groves scattered throughout the township, but the best of them have been destroyed by fire. Ridges of gravel and numerous swamps cover the two eastern tiers of sections, and

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Continued.*

render that part of the township unfit for cultivation. This township is exceedingly well adapted to stock-raising, there being already a number of settlers located therein.—*A. F. Martin, D.L.S., 1891.*

(*North and east outlines.*)—Along the eastern boundary the country is

24. prairie, mostly covered with scrubby willow and scattered bluffs of poplar.

The soil is of second-class quality. There is a small stream about eight feet wide with low banks and good water, running in a northwesterly direction through section 12. Along the northern boundary there is prairie, with occasional groves of poplar and willow and patches of meadow land or shallow marsh. There is a marsh and swamp with tall reeds in section 31 and part of section 32. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—This township is generally high and dry; it is traversed by the Turtle river, which flows through an alluvial plain underlaid with a bed of clay. The river affords a large supply of jackfish or pike. The land on each side of the river is very good, with the exception of an open plain in the northeastern corner of the township, where it is very alkaline. A small stream flows northeasterly from section 14 to section 32, where it disappears in a large marsh. The land on each side of this stream, with the exception of parts of sections 32 and 33, is very good, although marshy. Sections 31 and 32 are partly covered by marsh, which becomes dry in August and furnishes a great quantity of hay. This township is exceedingly well adapted to mixed farming. There are a number of settlers located therein.—*A. F. Martin, D.L.S., 1891.*

(*East outline.*)—The country along this line is alternately poplar woods and

25. marshes with hay, reeds, rushes and willows. The soil is of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*South outline.*)—Along this boundary there is prairie, with occasional groves of poplar and willow, with patches of meadow land or shallow marsh. There is a marsh with tall reeds and rushes in section 6 and part of 5. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—Two large marshes cover the southwestern and northeastern corners of this township. The marsh in sections 5, 8, and part of 7 furnishes a great quantity of good hay; this marsh could easily be drained into lake Dauphin. The southeastern part of the township contains good land, but it is invariably brushy; the land in the remaining portion is rather alkaline. There are numerous groves of poplar through the southwestern and northern portions of the township. The water throughout is alkaline. One small stream, known as the East Turtle river, contains good water in pools. The shores of lake Dauphin are rather low. The township is adapted to stock-raising.—*A. F. Martin, D.L.S., 1891.*

(*East outline.*)—The land traversed by this line is mostly level and gravelly,

26. covered with poplar woods and scrub with an occasional meadow. The soil is of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—The only land in this township adapted to agriculture is the two western ranges of sections where the soil is of good quality. In the remainder of the township the sloughs are too numerous and wet to admit of farming to any extent. The land that is dry has such a slight elevation above the sloughs that it will be impossible to drain it. There are no running streams and no natural drainage. This township would make a first-class cattle or horse ranch. Hundreds of tons of good hay can be had at present and many more if the meadows were cleared

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Continued.*

of the willows. Wild pea-vine is found nearly everywhere on the dry land. As to timber there are only a few bluffs of small poplar. Where the surface is not occupied by open meadows or sloughs it is thickly covered with poplar, willows and hazel scrub.—*J. Dickson, D.L.S., 1898.*

(*East outline.*)—Along this line the land is low and generally wet, covered

27. alternately with poplar timber and hay marshes with reeds, rushes and willows. The soil is gravelly, and of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

There is some green poplar from three to ten inches in diameter, which seems to have escaped the fire which destroyed the timber in a large section of this country. The surface of the ground is less elevated, and was partly submerged at the end of October.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The township is reached by a fair trail from Ochre river. The soil is generally a black loam with clay or gravel subsoil, suitable when drained for mixed farming. The surface is generally timbered with small poplar and willow undergrowth, interspersed with hay and other marshes. The timber is poplar and but little of it exceeds eight inches in diameter. The larger timber is scattered, probably the best being in the eastern part of the township. Hay can be procured in many of the marshes but in a wet season few if any of the marshes can be entered. The water is fresh and in spring about half the surface is flooded to a depth of from six inches to two feet. The surface is very level and little above the level of Dauphin lake. There are no streams and no chance for water-power. The climate is that of Dauphin district, and summer frosts are not common. Wood is plentiful for fuel. There are no stone-quarries nor economic minerals. Moose and elk are quite numerous in this district. A few jumping deer were also noticed.—*C. C. Fairchild, D.L.S., 1904.*

(*North and east outlines.*)—The country along these lines is generally covered

28. with a growth of small poplar and an occasional marsh of hay, reeds and rushes. There are also small patches of prairie here and there. The soil is gravelly and of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*East outline.*)—This boundary is prairie with numerous bluffs of small poplar, much of which, however, is brûlé. In places there are many scattered boulders. The soil generally is second-class.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This township is reached by a trail from Ochre River through township 27, range 15. The trail is very good in winter and summer but often impassable in spring time. The soil is generally a deep black loam suitable for grain growing. The surface is generally timbered with small poplar and willows with a number of sloughs especially in the northeast part. The largest poplar is about twelve inches in diameter but there is not much of this size. Most of the bush will run from four to six inches in diameter. Hay is cut in some of the sloughs now and in a dry season nearly all the sloughs could be mowed around the edges. Little water is found, except marsh water, which is not alkaline. The supply in the deeper marshes is permanent but wells are easily dug and the water procured from these is much better than the marsh water. In the spring the township is probably one-half under water from six inches to six feet deep. The streams carrying off this water are slow but generally dry up in August or September. There are no rapids, falls nor water-powers. Summer frosts are not frequent the climate being similar to that of Dauphin. Wood is the only fuel obtainable. There is no coal or lignite, and no stone-quarries nor minerals.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Continued.*

Big game abounds, moose and elks being very plentiful. A few grouse were also seen. Drains will be a necessity for parts of this township as at the present time many of the marshes hold water the year through.—*C. C. Fairchild, D.L.S., 1904.*

(*East outline.*)—This boundary is generally covered with poplar of small
29. size. There are a number of scattered shallow marshes and lakes. The soil is gravelly and of second-class quality.—*Hermon and Bolton, D.L.S., 1875.*

(*Subdivision.*)—This township has been subjected to so many fires that there is very little green timber left, and that mostly in isolated bluffs on or near the south boundary and along the north part of the west meridian. On all the remainder where the land is dry, another second growth is growing up, but from the number of standing dead trees and the quantity of timber strewn on the ground it must have been subjected to periodical fires. The land is very stony. One or two small and fairly good farms might be culled out of sections 8, 9, 16, 17 and 20. There are three brothers, ranchers, living at the south end of lake Manitoba, but they do not farm any beyond growing a few potatoes. They have between them some two hundred head of cattle besides horses. There are large hay meadows in sections 5, 6, 7, 8, 17, 18 and 19, where they get enough hay to winter their stock. Although sloughs are numerous and large all over the township they are too wet to grow hay, but around their edges and in the timber bluffs there is abundance of pasture to sustain a large number of cattle. The southwest bay of lake Manitoba stretches south as far as the centre of sections 16 and 17, and is a little over two and one-half miles wide on the north boundary. I saw no sign of any game other than prairie-chickens, muskrats, rabbits and coyotes.—*J. Dickson, D.L.S., 1904.*

This township is divided into two parts by lake Manitoba. There is only
30. an average width of about half a section of land on the west side of the lake. On this strip there are four squatters who live chiefly by fishing. The lake is a little over two and one-half miles wide on the south boundary, and four miles wide on the north boundary. On the east side of the lake the land is worthless, it being either a mass of stones or wet sloughs. The dry land is all thickly timbered with small poplar, balm of Gilead, a few birch near the water, and a very dense undergrowth of hazel, willows and alders. This was especially noticeable on the boundaries. There is no hay. Steeprock lake is a fine sheet of beautiful clear water, lying between the east boundary of lake Manitoba and the east meridian. Its south end is only a few chains north of the south chord of section 13 and it extends north to within a little more than half a mile of the north boundary. Pike river enters it at its most southerly point and it discharges into lake Manitoba on the north by McKenzie river. There is only a narrow strip of land between the north boundary of the township and lake Manitoba. I saw a few signs of moose; rabbits and partridges were very plentiful, also muskrats and coyotes. There are no roads, but the township is easily accessible from the south.—*J. Dickson, D.L.S., 1904.*

One rancher has stacked hay and built a stable in the southern part of the township this year. Very little hay is found around Steeprock lake, which has a fine forest-covered shore except at the north end. Some traces of gypsum were noticed in the neighbourhood of the lake. The country is densely wooded with small poplar, birch and black oak of little commercial value. Moose are plentiful in this district.—*G. A. Bennett, D.L.S., 1912.*

The land on the east boundary of township 30 is gently rolling, covered
30 & 31. with scrub poplar, oak and willow and a few scattered spruce and ash. The land in sections 1 and 2 of township 31 is low lying, covered with

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 15—*Continued.*

scrub, poplar and willow, which is valuable only for fuel. The most convenient route for reaching these township is by way of Winnipegosis, on the Canadian Northern railway, from which place there is a wagon trail to Crane River I.R.. This trail passes a little over a mile south of the south boundary of township 30. The soil in township 31 varies from a dark loam to clay and gravel, mixed with stone. No minerals were found. Game is plentiful, consisting of moose, elks and jumping deer, small wolves, foxes, rabbits, muskrats, partridges, prairie-chickens, ducks and geese. In lake Manitoba fish of many varieties are found. There are no settlers.—*A. Fawcett, D.L.S., 1907.*

This township, on lake Manitoba, is so cut up that every section has direct
31. access to the waters of the lake; there are no roads in it. The soil consists of from six to twelve inches of black loam overlying a clay subsoil, and is second-class. Most of the quarter-sections on the mainland are high enough to be free from the danger of flooding and are particularly suitable for settlement by that class of farmers who like to have access to water transportation and good fishing. The surface is level throughout and covered with small poplar and willow; there is usually a belt of open marsh land along the shore which is liable to flood, and the only available hay meadows lie between this marsh land and the timber. There are no water-powers in this township, and I saw no indications of coal, minerals or quarrying stone. Twin islands, which are really connected by a partly submerged reef strewn with great boulders, are level and covered with poplar, spruce and birch from eight to twelve inches in diameter. A crew of men were camped on South Twin island, at the time of the survey, taking out logs. There is not much game, except ducks, in this township.—*R. W. Cautley, D.L.S., 1908.*

In this township the western shore of lake Manitoba is crossed on the north
32. boundary of section 35, and Waterhen river is crossed on the north boundaries of sections 33 and 32. Between lake Manitoba and Waterhen river are bluffs of small poplar and patches of prairie and hay marshes. Two small creeks cross the line in section 34. West of Waterhen river are low ridges, covered with brulé, small poplar and willow, separated by tamarack swamps. The soil is black loam on clay subsoil.—*W. Christie, D.L.S., 1907.*

This is a fractional township on the shores of lake Manitoba; there are no roads in it and it is best reached by water. The soil is second-class and consists of black loam inclined to be peaty, overlying a clay and gravel subsoil. The surface is level, and covered with poplar and tamarack from two to six inches in diameter in that part of the township which lies west of Waterhen river and lake Manitoba; most of this part is fit for farming. East of Waterhen river the township is very much cut up by large reed marshes, but there is good land in sections 28, 33, 34 and 35. There are no extensive hay marshes in this township, but a great deal of hay may be cut from a narrow belt of good hay marsh which generally intervenes between the wet hay marshes and the timbered land. Waterhen river has an average width of twenty chains and a depth of six feet, with a current of from one to one and a half miles per hour; it flows through immense reed beds and has a number of small side channels. The reed marshes are always wet and subject to floods to a depth of three feet whenever the wind is from the southeast or south. There are no available water-powers in this township, and no indications of coal, minerals or quarrying stone were seen. Wood fuel is abundant and easy to transport on account of its proximity to the water. The marshes of this township provide a natural breeding ground for thousands of ducks and other water-fowl. North Twin island, of which the northerly half lies in section 1 of this township, is covered with spruce, poplar and birch from eight to twelve inches in diameter.—*R. W. Cautley, D.L.S., 1908.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16.

- (*South outline.*)—Along the southern boundary the country is hilly, and covered with a growth of poplar and willow. The poplar is of small size. There are two small lakes in section 1.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—On the slope of Riding mountain the township is well timbered throughout with good building timber. The soil generally is not very good, but in some parts the land is of the best quality of black loam.—*G. A. Lloyd, D.L.S., 1873.*

This township is best reached from Eden by roads which are opened up into it. The soil is comparatively good, being mostly a rich loam underlain by a clay subsoil and would be suitable for mixed farming. The surface is mostly all timbered with the exception of clearings. It is more or less rolling and in the eastern part of the township is very rough and broken by ravines. Poplar is the chief timber, though spruce and birch are found to be fairly plentiful, and was found throughout the township measuring up to twenty-four inches in diameter. The spruce is scattered about in the northern part and measures up to eighteen inches in diameter; most of the larger spruce has been cut. Hay of good quality was found in parts of sections 4, 6, 7, 17, 18, 20, 22, 27 and 29. The water is fresh and is obtained partly from Kerr lake, which covers a portion of the northwest quarter of section 30 and the southwest quarter of section 31, and a river, which enters the township at the northwest corner of section 34 and flows southeasterly through sections 34, 27, 21, 22, 23, 24 and 13. Numerous small spring creeks were observed flowing easterly out of the eastern tier of sections. The only fuel is wood and can be procured in any section in the township. Partridges, elks and moose are found, all of which seem plentiful. The climate is very good, but the country is subject to summer frosts. No water-powers, no stone quarries and no indications of minerals were found in the township.—*L. T. Bray, D.L.S., 1904.*

- (*North outline.*)—Sections 36 and 35 are very hilly and timbered with poplar, birch and willow. Sections 31, 32, 33 and 34 are rolling land timbered with poplar, white birch, pitch pine and willow; there are a few small patches of marsh. The soil throughout is second-class.—*J. McLatchie, D.L.S., 1872.*

(*Subdivision.*)—This township is on the eastern slope of Riding mountains. The eastern part of the township is very rough and hilly; the remainder is rolling land with numerous swamps and marshes. The whole is well watered and heavily wooded with poplar, spruce and tamarack and a little pine. The soil is a light clay loam.—*G. A. Lloyd, D.L.S., 1873.*

This township is, for the most part, rolling land with numerous swamps and marshes and wooded with poplar spruce, tamarack and some pine of very inferior quality. The soil generally is a light clay loam. The most easterly tier of sections is remarkably rough and hilly with numerous springs and small streams of excellent water running between the hills. The poplar trees which are very numerous on the hills are of good size and quality, but will be difficult to remove on account of the roughness of the country. There are no settlers in this township.—*C. Unwin, D.L.S., 1881.*

- (*North outline.*)—The land along this line is timbered with oak, poplar, and tamarack; there are a number of swamps between the hills. Section 4 is a willow swamp; sections 5 and 6 are covered with a spruce bush.—*J. L. Reid, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Continued.*

(*North outline.*)—The land along this line is timbered with oak, poplar,
20. spruce, tamarack, balsam, birch, elm and maple. There are several small
 creeks draining the township. Some first-class land is to be found in sections
 34, 35 and 36.—*J. L. Reid, D.L.S., 1873.*

(*Subdivision.*)—This township is altogether unfit for settlement, being composed of deep ravines, muskegs and low land, with very shallow soil. The whole of the township is forest, the timber being birch, elm, poplar, oak, spruce, maple, alder, hazel and juniper. It is well watered by small brooks.—*G. A. Bayne, D.L.S., 1873.*

This township is well wooded with spruce, white birch, elm, oak, ash, cotton-
21. wood and tamarack, much of which is large enough for building purposes.
 The soil for the most part is good, and there are numerous small streams,
 two or three of which are well adapted to lumbering and mill purposes.—*J. Otty, D.L.S., 1873.*

(*North outline.*)—The country along this line is more than half marsh and
22. muskeg. A gravel ridge crosses the line in section 34 and extends several
 miles both northwesterly and southeasterly. This ridge is about ten to fifteen
 feet in height, and has several breaks which afford passages for the water flowing from
 Riding mountain. The marshes are generally shallow and covered with a growth of
 willows. The dry land is covered with poplar, spruce, and scattered tamarack and
 birch.—*J. Doupe, D.L.S., 1873.*

(*Subdivision.*)—This township is covered with muskegs and swamps which could,
 however, be easily drained. The land is covered with rich hay meadows and several
 farmers have settled upon it and appear to be doing remarkably well. The chief timber
 is oak, tamarack, and poplar. The Canadian Northern railway runs through the
 easterly part of this township, and Laurier, a station on it, is located in section 12.—
A. F. Martin, D.L.S., 1897.

(*East outline.*)—This line runs over an open prairie with occasional bluffs
23. of poplar and patches of scrub. The soil is a dark sandy loam of first-class
 quality.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This township is altogether unfit for agricultural purposes as it
 is low and flat and is mostly covered with muskegs and swamps some of which are
 wooded with willows and spruce. Where high enough the quality of the land is
 good but it is very thickly wooded with willow, poplar and spruce.—*A. J. Tremblay, D.L.S., 1892.*

The land throughout this township is of fair quality but is mostly covered with
 numerous swamps. The wood consists of poplar, dry tamarack, spruce and some brûlé
 in the western part. The Canadian Northern railway runs northwesterly through this
 township.—*A. F. Martin, D.L.S., 1897.*

(*North outline.*)—Dauphin lake encroaches on the northern portion of this
24. township. The lake shore is rather low and marshy; beyond this belt there is
 good prairie and meadow land. Turtle river empties into the lake in section
 33. It has a slow current, is eighty feet wide and eight feet deep; the water is good
 and the banks are about eight feet high. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*East outline.*)—From the northeast corner of the township, seventy-eight chains
 south, we cross Turtle river. Two miles up this stream the half-breed settlement

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Continued.*

established a year ago is reached. The people, who have settled on both sides of the river, have made considerable improvements in the way of building and fencing, considering the short time they have resided in the locality. The land they have selected is of choice quality and a large proportion of the surrounding country is composed of marsh and meadow lands, while near the river and surrounding their buildings the land is covered with timber. South of Turtle river for seven miles the line passes through excellent land, mostly prairie, timber being found in detached bluffs. The soil here is a rich black loam with clay subsoil.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The northeasterly portion of the township is nearly all marsh. The banks of the Turtle river are from two to five feet above water in this part. The remainder of the township is covered with small poplar and willow, much of which has been killed by fire. The alluvial soil is a dark sandy loam resting on a sandy subsoil. The township as a whole is rather too low for tillage.—*W. Beatty, D.L.S., 1887.*

(*East outline.*)—Section 1 is marshy; parts of sections 12, 13 and 36 are open
25. prairie with a first-class soil.—*T. Fawcett, D.T.S., 1890.*

(*South outline.*)—Sections 1, 2 and part of 3 are nearly all either marsh or meadow land. There is some heavy poplar and oak timber in section 4. The land is of second- and third-class quality. Dauphin lake encroaches on about two-thirds of the westerly part of the township.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—There are only 1,442 acres in this township, lake Dauphin covering the whole of the remaining portion. The soil is impregnated with alkali, and therefore is not very desirable for cultivation. The water in the wells is not even suitable for drinking purposes and that in the lake is not good unless procured from a considerable distance from the shore. There is a flat of about ten chains in width between the water's edge and the bank, but it is very boggy, and covered with water whenever the wind blows from the north. I found two squatters in this township, one of whom had ploughed considerable land, in which a great quantity of alkali was visible. Fish are very plentiful.—*A. F. Martin, D.L.S., 1891.*

(*East outline.*)—The timber along this boundary has been nearly all killed by
26. fire, and is in splendid condition for fuel. In some places the fire which killed the timber has burned off the surface soil to a depth of six inches. The water in lake Dauphin is very shallow. Along the northern shore of the lake is a belt of timber, mostly oak, and the land is excellent for pasture.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This is a fractional township, the southwest half being occupied by Dauphin lake. The surface has been burnt over and is now covered with low scrub intermixed with patches of pea-vines and vetches. There are also numerous hay meadows where large quantities of good hay may be cut. The soil is rated as first-class, and is well adapted to mixed farming or stock-raising. Three squatters were found in this township.—*P. R. A. Belanger, D.L.S., 1895.*

(*East outline.*)—This boundary is mostly covered with dry timber; the coun-
27. try along the east side of Dauphin lake being flat and the belts of timber broken up by marshes and marshy meadows. The soil all along here is of a marly nature, in some places stony, with a subsoil of clay mixed with gravel.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The soil is generally a black loam with clay subsoil and, when cleared and drained will be suitable for mixed farming. A trail from Ochre River to

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Continued.*

East Bay and thence to this township renders it easy of access. The surface is timbered with small poplar and willow generally averaging three inches in diameter. In many places marshes are found and some few poplar and spruce trees up to ten inches in diameter are scattered over the township. Hay, consisting of coarse marsh grass, can be procured in many of the marshes in a dry season. The water is fresh, but the supply is doubtful during the whole season. There are no streams and no chances of water-power. In the spring much of the surface is flooded, especially the marshes and surrounding lands, but this usually dries up by fall. The climate is that of Dauphin district with few summer frosts. Wood is easily obtainable for fuel. No coal or lignite veins were observed. There are no stone-quarries nor minerals of any kind. Moose, elk and jumping deer were seen in this township.—*C. C. Fairchild, D.L.S., 1904.*

(*North and east outlines.*)—The country along these boundaries is much
28. the same as that of the preceding township, except that it is more open, with larger marshes and some good hay meadows. There is a salt plain in sections 32 and 33, through which a stream of strong brine slowly wends its way towards the north. Narrow belts of timber and marshy meadows are the marked features of these lines.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The township is reached by trail from Ochre River or Dauphin through East Bay. The trail is bad in a wet season, but very good in winter or fall. The soil is a good black loam suitable for grain growing, but rather stony in places. The surface is generally covered with small poplar much of which is dead. There are numerous sloughs in the northern part. Some of the timber is large enough for building but none fit for lumber. Plenty of coarse slough hay can be obtained in dry seasons. The water is generally fresh, but the sloughs nearly all dry up in a dry season. There are no streams and no chances of water-power. The climate is that of Dauphin with very few summer frosts. Wood is the only fuel available and is plentiful in the township. There are no coal or lignite veins, minerals nor stone-quarries, but loose boulder stone is found in places throughout the township. Moose, elks, and jumping deer are plentiful. If this township is drained all of it will be suitable for agriculture. At some seasons, as last spring, the surface is about one-half under water, but this gradually dries up and this fall little water was obtainable in the township.—*C. C. Fairchild, D.L.S., 1904.*

(*East outline.*)—The east boundary passes through a timbered country for
29. nearly the entire distance. West of the boundary, for some distance, there are open meadows, extending north and south, in some cases for several miles. Half a mile west of the five-mile post there is a good situation for a cattle ranch.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This township is all either timbered land or sloughs. The timber which is tall but not more than ten inches in diameter, consists of poplar and balm of Gilead, with thick underbrush and a few small spruce, mostly mere poles, the largest being near the southeast corner of section 16. The trees had all been killed by fire two years ago and the grove had an area of about three acres. There is no hay to be got west of the centre meridian, the sloughs being too wet. East of that line there are large meadows of good hay and a large quantity was cut last season. Most of the township has been burned over more or less, but it is all covered again with a vigorous second growth. The land is mostly stony and not fit for farming. I was not able to run the north boundary of section 19, owing to a large and very wet slough filled with tall reeds. None of the sloughs I saw can be drained. Spence lake occupies a part of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Continued.*

sections 25, 26, 36, nearly the whole of section 35, and a small portion of section 34. There are two half-breed families located on the northeast corner of section 34. They have cleared enough land for their buildings, a small patch for potatoes, and have each a good herd of cattle. They said they did not wish to locate, so I took no declarations. There is no road to the west except the trail we cut to get in by, but there is a good trail from there south to Ste. Rose du Lac. Moose, elks, jumping deer and partridges are all fairly plentiful.—*J. Dickson, D.L.S., 1904.*

(*Exploratory survey.*)—Meadow portage which runs between lakes Manitoba and Winnipegosis, is nearly one and three-quarters miles long. The portage traverses a low marshy neck of land; its general course is easterly, and the greatest elevation above lake Winnipegosis is ten feet. A test pit sunk at this point gave twelve inches of black loam soil, three inches small limestone, twelve inches marl, and then more limestone. The timber in this section is very poor, the best being a few scrubby oak twelve inches in diameter.—*H. B. Smith, C.E., 1872.*

(*East outline.*)—In continuing the line north along the eastern boundary of this township we run parallel to lake Winnipegosis, and there is a large marshy meadow lying between the line and the lake in sections 1 and 12. This would be another good place for a cattle ranch. At the three-mile point a branch of lake Manitoba is seen about twenty chains east of the line. After leaving the first mile post we pass through timber (mostly brulé), broken only by a few marshy meadows, until we reach lake Manitoba, about ten chains from the northeast corner of the township. Meadow portage, crossing from lake Winnipegosis to lake Manitoba, is situated south of the 8th correction line, and leaves lake Manitoba ten chains from the northeast corner of township 30, range 16.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This township is all bush land and wet sloughs alternating. The timber is poplar and balm of Gilead, with a dense undergrowth all over. I saw three small groves of small spruce. None of the timber is of any commercial value. Many of the sloughs are full of very tall reeds, which had to be mown down by brush hooks before the lines could be either run or chained. I found this very tedious, as in the majority of cases it meant wading also. The land is nearly all stony, and even where it is not so, it has not sufficient elevation above the sloughs, none of which can be drained, to fit it for farming. There is one half-breed rancher living on the shore of lake Spence, near the south boundary in section 3, but he did not desire to locate, and there is another, an Iclander, in the northeast corner of section 36, from whom I took a declaration. With the exception of the east one and three-quarter miles, and six chains of the north boundary of section 36, which is in lake Manitoba, the north boundary is all in lake Winnipegosis. A good wagon road a little south of the boundary locally known as the "Meadow Portage trail," extends between the lakes, striking lake Manitoba about three-quarters of a mile south of the boundary, from which the Ste. Rose du Lac trail starts and runs south across the township between lakes Manitoba and Spence. Lake Spence is a fine body of sweet, pure, spring water. There is not a single stream flowing into it. It abounds with fish and water fowl, and extends north into sections 23 and 24. On the district map it is shown as a bay of lake Winnipegosis, but this is an error, as there is no connection whatever between those two lakes. It discharges into lake Manitoba through a fine creek a short distance north of the south boundary of the township. North of this lake there are some good hay meadows and a large quantity was taken off them last season by the Meadow Portage settlers. There are moose and jumping deer, partridges and rabbits in this locality. The township is easy to reach either from Ste. Rose du Lac or Winnipegosis village.—*J. Dickson, D.L.S., 1904.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Continued.*

(*East outline.*)—This outline passes through second-growth poplar from two
31. to five inches in diameter with some willow and old brulé. The surface is almost level and the soil consists of black loam from five to eight inches in depth on a subsoil of clay with gravel in a few places. Some small hay meadows occur in sections 12 and 1. No coal, stone-quarries nor minerals of economic value were noted. Moose and jumping deer are plentiful. A few partridges were also seen and ducks are plentiful in lake Winnipegosis.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This township is best reached by water as there are no roads running to it. Sections 15, 22, 27, 34 and the westerly half of sections 23 and 35 are all one big reed marsh with isolated patches of scrub in places, and are unfit for settlement. The remainder of the township is level and covered with poplar and willow scrub and brulé. The soil consists of from four to ten inches of black loam overlying stony clay or gravel subsoil, and is second-class. There are no hay meadows of any size, but there is generally a belt of good hay land lying between the reed marshes and the timbered land. All sections referred to as being covered with reed marsh are liable to be flooded to a depth of from two to three feet. There are no water-powers and no indications of coal, minerals or quarrying stone. Moose were seen and the marshes form a natural breeding ground for ducks.—*R. W. Cautley, D.L.S., 1908.*

(*North outline.*)—In this township the greater part of the line falls in a bay
32. of lake Winnipegosis, the eastern shore of which is crossed in section 34 and the western shore in section 31. The shores of lake Winnipegosis are here very low and marshy, tall reeds growing in the water along the shore. On the north boundary of section 36 and part of 35 the line passes through brulé with small poplar and jackpine, and tamarack swamps. The soil is black loam on clay subsoil. Some settlers have already located along the shore of the lake in townships 31 and 32. They engage in ranching and fishing.—*W. Christie, D.L.S., 1907.*

(*East outline.*)—The surface along this outline is nearly level. The soil is mostly good, consisting of black loam from four to eight inches in depth on a clay subsoil. In a few places, however, gravel occurs. A spruce and tamarack swamp about half a mile in width is crossed by the east boundary of sections 25 and 24. The remainder of the outline passes through small poplar, willow and jackpine with brulé. In section 1 the second-growth poplar has attained a diameter of five inches. No stone-quarries, coal or minerals of economic value were noted. Moose and jumping deer are plentiful. A few partridges and coyotes were also seen, and ducks are plentiful in lake Winnipegosis, an arm of which extends through this township from south to north.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This township is on lake Winnipegosis, distant about twenty-four miles in a northeasterly direction from Winnipegosis, the terminus of a branch of the Canadian Northern railway. There are no roads in this township. The soil consists of from three to eight inches of black loam overlying a very stony clay subsoil and is second- and third-class. The surface is level and for the most part covered with poplar and willow scrub, with the exception of large marshes which occur throughout the township; almost all of the fractional sections in the west tier, all of Long island, all of fractional sections 9, 16, 21, and 34 are covered with open marshes full of reeds, besides which there is a similar marsh running through sections 2, 3, 11, 14 and 23. There is generally a belt of good hay marsh lying between these reed marshes and the edge of the timbered land. Although there are no rivers in the township, the long arm of lake Winnipegosis, which cuts it in two, has a perceptible northerly current towards the outlet of the lake, into Waterhen river; the main

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 16—*Continued.*

channel of this current lies between Long island and the easterly part of the township, and is sufficient to make the winter ice unsafe. There are no water-powers nor indications of coal, minerals or quarrying stone in the township. There is abundance of wood fuel in the district, but not a great deal in this particular township. Moose and jumping deer are found throughout this country, and there is any amount of wild fowl.—*R. W. Cautley, D.L.S., 1908.*

RANGE 17.

(*East outline.*)—The surface along this line is rolling and is generally
17. timbered with small poplar with a dense undergrowth of willow and hazel.

Large poplar, suitable for building purposes, may be found in section 36. The soil generally is of second-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is chiefly timbered with very small poplar, spruce, gray willow and tamarack, of little use except for firewood. The soil is of medium quality. The surface is rolling and somewhat rough. There are many muskegs, small lakes and some fine springs.—*W. Burke, D.L.S., 1873.*

(*North and east outlines.*)—The northeastern portion is covered with a growth
18. of small poplar, pitch-pine, spruce and tamarack. The soil in this portion of the township is a light sandy loam; with this exception, the soil throughout the township is a rich sandy loam.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township closely resembles the preceding one, with the exception that it is rather more thickly timbered.—*W. Burke, D.L.S., 1873.*

(*East and south outlines.*)—Along the east outline the land is nearly all
19. swampy, covered with spruce, tamarack, poplar and birch. The soil is of third-class quality. Along the southern boundary the land is higher, with fewer swamps. The soil is of second-class quality.—*J. L. Reid, D.L.S., 1873.*

(*North and east outlines.*)—The country along the north outline is very hilly
20. and covered with woods, consisting of poplar, birch, tamarack and spruce. There is a valley over one and a half miles in width intersecting this boundary. It is about twenty-five feet deep, and in it are numerous hogs-back ridges, ranges of hills and deep gullies. There are several small creeks running through the valley, the banks of which are from sixty to eighty feet high. The country is so rough and broken as to render it almost impassable. The soil within the valley is rated as third-class, and that on the elevated portion as second-class. The east outline crosses a hilly country covered with woods consisting of spruce, tamarack, poplar and birch. The soil is of second-class quality.—*J. L. Reid, D.L.S., 1873.*

(*East outline.*)—In sections 1 and 12 there is a valley about 400 feet
21. deep, which is full of hogs-back ridges and timbered with birch, poplar and spruce. Sections 13, 24, 25 and 36 are timbered with elm, oak, birch, spruce and tamarack. The soil is of third-class quality.—*J. L. Reid, D.L.S., 1873.*

(*North outline.*)—The surface along this line is covered with heavy poplar,
22. oak, birch, tamarack and spruce with dense undergrowth of hazel and willow. The land is good and of second-class quality. Ochre river runs in a northerly direction through section 32.—*E. Bray, D.L.S., 1875.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 17—*Continued.*

(*East outline.*)—The land along this line is timbered with poplar, spruce, tamarack, oak and elm. There is a creek in section 13. Along its banks the land is of first-class quality; away from it, it is third-class. There are occasional swamps. Section 36 is all swamp.—*J. L. Reid, D.L.S., 1873.*

(*Subdivision.*)—The land, generally, in this township is of poor quality; some fair soil may be found on the west side of the Ochre river which runs through sections 19, 30 and 32. The timber consists mainly of poplar. The banks of the river are about seventy-five feet high.—*A. F. Martin, D.L.S., 1897.*

23. (*East and south outlines.*)—The land along the east outline is nearly covered with timber, consisting of poplar, oak and spruce. A good deal of it is windfall, thickly grown up with willow and young poplar. There are occasional marshes here and there. The soil is of second-class quality. The land along the southern boundary is of a similar character to that of the eastern. Ochre river flows in a northerly direction through section 4. Its banks here are eighty-five feet high.—*E. Bray, D.L.S., 1876.*

(*Subdivision.*)—This township is well watered by Ochre river and several tributary creeks. The river flows northerly through the centre of the township; it is about one chain wide and has a large flow of good clear water even in very dry seasons. For a mile on either side of the river the soil is a deep clay loam of the best quality, and is covered mostly with oak, elm, ash, poplar, and remarkably large willows. The eastern and western sides of the township are somewhat broken by stony ridges and marshes; there are, however, several good quarter-sections between these. The land here is covered with large willows and bluffs of burnt poplar. The southeastern part is covered with brulé of large poplar, while the southwestern part is mostly poplar and spruce badly damaged by fire. In sections 7 and 8 there is a ridge of white oak from six to eighteen inches in diameter. Wild hops grow in abundance all over the township. Good water may be obtained by digging.—*J. E. Woods, D.L.S., 1894.*

24. (*North outline.*)—Along the shore of Dauphin lake there is a belt of poplar and oak timber with willow intermixed. Back of this there is good meadow land and bluffs of poplar and oak. Ochre river enters the lake near the southern boundary of section 35. It is seventy feet wide at its mouth and three feet deep.—*E. Bray, D.L.S., 1875.*

(*East outline.*)—Along the eastern boundary the timber is nearly all windfall, with a new growth of poplar and willow. The land is of a second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—The surface of the township is level. Ochre river enters it in section 4 and, running in a northeasterly direction, flows into Dauphin lake. This river has an average width of about one chain. Its banks are not over ten feet in height. That portion east of the Ochre river is covered with windfall and overgrown with a dense growth of young poplar and willow. West of the river it is covered with small poplar and willow. Clumps of spruce and tamarack in sections 4, 5, 6, 7 and 8, and elm and poplar along the banks of the river, are suitable for building timber. Low prairie openings occur in sections 27, 28, 33 and 34, and there are several large marshes west of the river. East of the river the soil has an average depth of eight inches of black loam and is rated as first-class. West of the river the soil is a sandy loam.—*J. McLatchie, D.L.S., 1884.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 17—*Continued.*

- (*South outline.*)—The surface is generally covered with scrubby willow and
25. an occasional bluff of poplar and oak, together with scattered patches of meadow land.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—This township extends along the west shore of lake Dauphin. One portion, composed of parts of sections 18, 19, 30 and 31, produces a rank growth of reeds and is worthless for hay or farming land. The other portion, composed of parts of sections 3, 4, 5, 6 and 7, is covered with a dense growth of willow and poplar. The soil is rated as first- and second-class, and is fairly well adapted to agricultural purposes.—*J. McLatchie, D.L.S., 1884.*

- (*North and east outlines.*)—This township is nearly level with patches of
27. prairie, but generally covered with poplar timber and scrub, much of which is burnt. There is a strip of hardwood along the shore of lake Dauphin, consisting of oak, elm, ash and maple. The soil is a black vegetable loam from six to twenty inches in depth with a clay subsoil; in some places the latter is gravelly.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The greater part of this township is occupied by Dauphin lake. The surface is well timbered, with the exception of the sloughs. Although fire has passed over it there is still considerable green timber, especially along the shore of the lake. It consists of poplar and balm of Gilead, and is in sufficient quantities for the requirements of the settlers. The land is second-class. Large quantities of hay can be cut in the meadows, and by clearing away the willows a much greater yield could be obtained.—*J. Dickson, D.L.S., 1898.*

- (*North and east outlines.*)—The country along these lines has a level surface
28. covered with poplar, most of which has been burnt. There are a few small prairie openings, tracts of scrubby land, and meadows. The soil is a black loam, from six to twenty inches in depth with a clay subsoil; occasionally the latter is rather gravelly.—*T. Fawcett, D.L.S., 1890.*

(*Subdivision.*)—This is a fractional township, the southwest portion being in lake Dauphin. The surface is timbered throughout, but a large proportion has been killed by fire. Along the lake shore there is a wide green belt. The prevailing varieties of timber are poplar and balm of Gilead. There are also a few small groves of spruce of a diameter not exceeding nine inches. In sections 32 and 33 there are several groves of spruce large enough for railroad ties and medium-sized sawlogs. On the whole the land may be rated as second-class, but there is a fair amount of first-class land. Good hay is found in nearly all the meadows and sloughs.—*J. Dickson, D.L.S., 1898.*

- (*East outline.*)—The eastern boundary, for two and a half miles from the
29. southeast corner, passes through belts of timber which are separated by marshy meadows or marshes. The line then crosses a marsh, between three and four miles in length, in which there are a number of saline springs. The northern fifty chains of the line passes through burnt land. The soil, where the land is dry, is a black loam averaging about sixteen inches in depth and is of good quality.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—There is very little of this township adapted to settlement. There are a few quarter-sections of good land in the southeast quarter where the soil is good and free from stones, but it is not sufficiently elevated above the level of the sloughs to admit drainage. Nearly all the dry land is either stony or gravelly. Nearly all of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 17—*Continued.*

the sloughs contain alkali, and there is very little good hay in any of them. The land got worse and the sloughs more numerous as we travelled north. There is a large salt slough covering nearly all of sections 29, 30, 31 and 32. A large salt creek crosses the north boundary of section 32. The timber consists of poplar, with a few small groves of small spruce and tamarack. In the south parts of sections 4, 5 and 6, there is some good spruce.—*J. Dickson, D.L.S., 1898.*

The part subdivided in this township is all thickly timbered, alternating with very wet sloughs which have bluffs of willow, alder and spruce scattered through them. There is a large and very wet slough, through which the east boundary runs for three miles, which prevented me from running the east part of the north boundary of section 24. It is a perfect quagmire and full of tall reeds. The timber is poplar and balm of Gilead, a few clumps of small spruce and still smaller tamarack and a very dense undergrowth. Very little of the timber is large enough for house logs. The sloughs are very wet, producing little hay, and are not capable of being drained. The dry land is stony. There is one squatter in section 30. I found a newly-opened road from Fork River station into the northwest quarter of section 20, where a new settler was starting. There are no other roads in that part of the township. Moose and partridges are plentiful.—*J. Dickson, D.L.S., 1904.*

(*East outline.*)—From the southeastern corner, running north, the line passes

30. through tracts of burnt timber, alternately with marshy meadows, to lake Winnipegosis. The soil is a black loam varying in depth from three to eighteen inches with a clay and, in some places gravelly subsoil.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This township is all either heavily timbered or open marsh. The timber is poplar and balm of Gilead, with a dense undergrowth of hazel, willow and alder. With the exception of some spruce in sections 2, 3 and 10, the timber is only fit for firewood and fencing. What spruce I saw is of fine quality but not large. The land is stony. The marshes are mostly too wet to produce hay and are not capable of being drained. This township is bounded on the north by lake Winnipegosis, about one-third of it being in the water. Most of the shore is marsh, the water only approachable in summer at isolated points. There were twenty squatters, all Galicians, except three, a father and two sons, who are Canadians. The land is not such as is likely to attract any settlers except those from those parts of the old world where the ownership of even a moderately sized farm is a boon, and enough hay can be cut around the sides of the sloughs to maintain for each a small herd of cattle. The squatters (they are mostly on the west side of the township), have made a road to Winnipegosis village, but the only means of access to the east half during summer is by water. Moose and jumping deer are plentiful in the woods, with muskrats, ducks and geese on the lake shore.—*J. Dickson, D.L.S., 1904.*

Charlie island lies in lake Winnipegosis, about eight miles in a southeasterly direction from the Canadian Northern railway station at Winnipegosis. The soil is second-class. The surface is level and covered with small poplar and birch, which is of no value for lumbering purposes. There are no hay meadows or marshes of any extent on the island. I was informed that there is an outcrop of stone on the island that might be valuable for building purposes, but, owing to the depth of snow, I was unable to verify this report. Snake island lies in lake Winnipegosis, about five miles east of the Canadian Northern railway station at Winnipegosis. The soil is second-class. The surface is level and covered with poplar, ash and oak scrub, which is of no value for lumbering purposes. There is some hay meadow and hay marsh of fair quality. I was informed that there is a bed of stone on the island which is of

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RANGE 17—*Continued.*

value for building purposes, but, owing to the depth of snow, I was unable to verify this report; from the general character of the country I think the stone referred to must be limsetone. The Government fish hatchery, with buildings for the officials in charge, is situated on the southerly end of the island.—*R. W. Cautley, D.L.S., 1908.*

(*North outline.*)—In this township the line passes over a series of low flat
32. ridges, covered with brulé, a growth of small poplar and a few jackpine, separated by muskegs and hay marshes. The eastern shore of lake Winnipegosis proper is reached in section 33. A small lake is also crossed in section 36. The soil is black loam on clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—There are no roads in this township, which, however, is easily accessible by water from Winnipegosis, a station on the Canadian Northern railway, which is distant about twelve miles in a southwesterly direction. The soil consists of black loam, varying in depth from four to eighteen inches, overlying a stony clay subsoil, and is second-class, but is suitable for mixed farming. The surface of the whole township is practically level and is mostly covered with small poplar, tamarack and heavy grey willow. Sections 1, 9, 10, 11, 12, 13, 14, 23, 24, 25 and 36 are partly open, being chiefly open hay slough alternating with isolated bluffs of poplar and willow scrub; this slough land is very wet and subject to flood from lake Winnipegosis in many places; hay can be cut wherever the land is high enough, but section 1 and parts of sections 10, 12, 13, 23, 24 and 35 are so frequently submerged that they are nothing but vast reed beds, and are quite unfit for settlement of any kind. Lake Winnipegosis and the large lake in sections 25 and 36 provide available water for all needs of settlers and their stock in all parts of the township. There are no water-powers in this township, and I did not see any indication of coal, minerals or quarrying stone. Moose, jumping deer and bears are found in this township, and ducks are numerous. Ermine island lies in section 36, township 31. It is low and marshy with a growth of poplar, balm of Gilead, oak, elm and maple scrub and is used as a winter fishing station.—*R. W. Cautley, D.L.S., 1908.*

RANGE 18.

(*South outline.*)—The surface is generally rolling, and covered with numerous groves of poplar and willow. The soil is of good quality. There are many small lakes, ponds and marshes throughout.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling land, well supplied with water as many of the sections contain a lake or a portion of one. There is a good deal of timber, which is largely composed of birch, poplar and willow, mixed. The soil is excellent and deep.—*G. A. Lloyd, D.L.S., 1873.*

All the land along the east and south boundaries and a portion of the interior of this township has been occupied by industrious and prosperous Scandinavian settlers most of whom are from Sweden. Since settlement commenced large areas have been ravaged by fire, leaving the land almost ready for the plough in some places, while in others a dense second growth is springing-up. Large sections were found producing a heavy crop of vetches and wild peas, also large patches of raspberries and saskatoons. Most of the land is good, but some of it has been greatly damaged by fire. There are a great number of lakes and ponds throughout the township, all of which contain good pure water. Most of the lakes are small, and several of them are well stocked with jackfish. Wild ducks abound in all of the ponds and lakes, and elks are plentiful in the timbered districts.—*J. Dickson, D.L.S., 1900.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 18—*Continued.*

(*North outline.*)—Along the northern boundary the surface is rolling, and
18. chiefly covered with timber, principally poplar, intermixed with spruce. There is also a small quantity of tamarack here and there. The soil is a good sandy loam.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is gently rolling prairie. The soil is of fair quality, but light. There are numerous lakes and ponds and some of the former abound in fish. The township is chiefly wooded with poplar and spruce. Rolling river flows out of Otter lake which is in the southeastern corner of the township, and crosses it in a southwestwardly direction.—*G. A. Lloyd, D.L.S., 1873.*

This township consists of light rolling land of fair quality, with numerous lakes and ponds scattered throughout. The land is fairly well timbered with poplar, spruce, and some birch; the best of the spruce, however, has been cut and removed. Otter lake, which is of considerable size and abounds with good fish, occupies the southeast corner of the township. Rolling river flows out of this lake, and is a valuable stream on account of its abundance of fish and convenience for floating logs down to the mills and settlements. There is a settlement about ten miles to the south of this township.—*C. Unwin, D.L.S., 1881.*

(*South outline.*)—Along this line the country is rolling prairie, with scattered poplar and small shrubs. The land is of first-class quality.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—The surface of this township is very rough, and broken by numerous lakes and muskegs. Spruce, poplar, and jackpine, varying from five to twenty-eight inches in diameter, cover the entire surface. There is a considerable amount of burnt timber and also some that has been cut and apparently left to rot. The soil is of second- and third-class quality with a sand and gravel subsoil, and in my opinion would not be suitable for agricultural purposes. Whirlpool river, a stream varying in width from twenty to eighty links and about three feet deep, affords an excellent supply of clear fresh water and abounds with fish. Clear lake, a portion of which is situated in the northwest part of the township, is a beautiful body of fresh water and is surrounded by hills covered with spruce and birch. Several varieties of fish, the chief one being whitefish, are found in this lake. The Thomson trail to Dauphin lake runs through this township.—*E. W. Hubbell, D.L.S., 1896.*

(*North outline.*)—This boundary is timbered with poplar, spruce, tamarack
20. and high thick willows and is marshy in places. There are several small creeks flowing southwards. There is a lake, partly in section 33, and extending northwards into the adjoining township.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—The surface of this township is very rough and hilly and covered with a dense growth of spruce, poplar, and jackpine, varying in diameter from four to twenty-four inches, of which a considerable quantity is suitable for lumber and other manufacturing purposes. Immense muskegs are interspersed throughout, especially in the southeast portion. The Thomson trail, recently opened by the Manitoba Government, traverses the southwest part and leads to Dauphin lake. Owing to the gravelly nature of the soil, the prevalence of muskegs and the quantity of timber, I do not consider this a desirable township for settlement.—*E. W. Hubbell, D.L.S., 1896.*

(*East outline.*)—The country along this line is flat and thickly wooded. Section 25 and 36 are rough and broken by deep ravines. The soil is all second-class.—*A. F. Martin, D.L.S., 1897.*

21.

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 18—*Continued.*

22. (*East outline.*)—This outline traverses a rough broken country covered with a dense forest of poplar and thick hazel underbrush. The Ochre river runs through section 13 in a northeasterly direction, and the Little Ochre river through section 25. The soil consists of sandy loam about eight inches deep, with a subsoil of sand.—*A. F. Martin, D.L.S., 1897.*

23. (*North outline.*)—The country along this line is prairie, with many bluffs of poplar, scrub and a few ash; much of the timber however, has been burnt. The surface is undulating, and there are a number of hay meadows. The soil is a black loam, from eighteen to twenty-four inches in depth, with a clay subsoil.—*T. Fawcett, D.T.S., 1890.*

(*East and south outlines.*)—The country along these lines is heavily timbered with poplar, oak, elm, maple, birch and some spruce. There are a few small patches of meadow, in which there are willows and alders. The land is all of first-class quality.—*T. Fawcett, D.T.S., 1890.*

(*South outline.*)—Along this line the surface is very hilly and broken by spurs of Riding mountain. It is covered with heavy woods of poplar, birch, spruce and elm, with a dense growth of hazel and willow. The land is stony and of third-class quality.—*E. Bray, D.L.S., 1875.*

24. (*North outline.*)—The surface is mostly covered with scrubby poplar and willow, with scattered bluffs of poplar and occasional spruce swamps and marsh. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—This township is much broken by muskegs and swamps. The soil is a light sand of poor quality, and is mostly unfit for tillage. The timber has been nearly all killed by fire.—*W. Beatty, D.L.S., 1887.*

25. (*South outline.*)—The surface is mostly covered with scrubby poplar and willow, with scattered bluffs of poplar and occasional spruce swamps and marsh. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—The soil, where tested, was found to be rich black loam from one and a half to two feet in depth with a clay subsoil. Most of the township is timbered with fine oak, ash, elm, maple and poplar.—*G. McPhillips, D.L.S., 1884.*

26. All the township is timbered, excepting the two easterly rows of sections adjoining lake Dauphin. The timber is principally poplar, of good size for building purposes. Along the rivers are belts of oak, ash, elm and maple. The ash, though not very large, is good. The oak and elm are very large. The soil is a black clay loam of about one and a half feet in depth. In the northern portion of the township some sand and a little gravel are mixed with the loam.—*G. McPhillips, D.L.S., 1884.*

27. The surface is level and is only a few feet above the level of Dauphin lake. There are extensive hay meadows along the shore of this lake in sections 15, 22 and 27, and also a considerable area in sections 32, 33 and 34. Some ranchmen have taken advantage of this and have for a number of years kept a large herd of cattle here. A meadow of varying width but of a large total acreage extends almost continuously along the Indian trail that crosses the township through sections 17, 20, 19, 30, 29 and 32. The marsh in sections 19 and 30 is for the most part too wet to produce hay; it is chiefly a muskeg, with a considerable depth of peaty soil supporting a growth of short, thin grass. Excepting the openings above described, this

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 18—*Continued.*

township is timbered with the kinds of woods usually met with in Manitoba, namely, poplar and the different species of willow. Along the Valley river there is some large poplar, balm of Gilead, elm, ash, maple, and also some oak at a few points. Towards the mouth of the Valley river and also along the meadows bordering Dauphin lake the bush is composed very largely of willow. The soil in the timbered portions is a clay loam, loam or sandy loam, and is everywhere of good quality, and should produce good crops when cleared of the bush. Already the fire has killed the timber along the westerly side of the township and in the greater part of sections 17, 16 and 21. The Valley river is well known as a perennial stream of clear, sweet water, greatly enhancing the value of the contiguous land, and offering a powerful inducement to settlement generally. This stream averages about a chain in width, and flows in a tortuous course with an easy current over a gravelly bed and between banks of silt of about eight or ten feet high. At the time of our survey it could in many places be forded without the water coming above the knees. The shore of the lake to the south of the river mouth and also to the bay to the west thereof appears to have a large percentage of mud in its composition, while immediately around the mouth there is nothing but sand and gravel. There are a few small-sized boulders along the shore in section 15, but there are very few throughout the soil of the township generally. In conclusion I may observe that this township with its good soil, its hay lands, its timber and exceptional water supply offers advantages to the stock raisers or to the ordinary agriculturist which are to be found only in the most favoured parts of the province.—*J. McAree, D.T.S., 1890.*

28. The greater part of this township is occupied by Dauphin lake. The surface, as that of the adjacent country, is level with an average elevation of about eight or ten feet above the present level of the lake. The soil is of good depth, and consists of a loam or sandy loam, with a clay subsoil in the southern part and sand in the northern. The south portion of the township is more or less densely wooded, with an occasional meadow opening. In the north part these openings are more numerous and the bush is less dense. The soil appears to be very free from boulders. The timber is poplar and willow, much of it having been killed by the fire which swept over this district in 1886. Most of the green timber is small, but there is some large enough for fencing, and also some even large enough for farm buildings. Several streams formerly crossed the township to lake Dauphin; these are dry at present. Mossy river, the outlet of Dauphin lake, flows through section 32. It appears to be a muddy stream with no perceptible current, about a chain and a half wide and about three feet deep, with clay banks about ten feet high. Dauphin lake is shallow for a long distance from the shore. The bed is mud or sand, with some boulders in places. Between the edge of the wood, which might be called the high-water mark, and the present water line there is a belt varying in width from one to ten chains covered with boulders in sections 4, 5, and 8, and with sand, mud, gravel, and boulders in the northern part of the township, where also there is a more or less sparse growth of rushes and wiry grass. There is some meadow land along the shore in sections 19 and 30. The boulders are chiefly of some variety of Laurentian rock. This township is suitable for agricultural purposes. The burnt land could with but little labour be cleared off and be made ready for the plough and even in the green bush the timber could be removed by two successive burnings. This fact in connection with the hay meadows existing in the woods along Dauphin lake and along the dry watercourses, the presence of plenty of wood for building, fencing and fuel, and the proximity to a never-failing supply of good water in Dauphin lake gives a combination of qualities favourable to mixed farming or even ranching on a small scale that cannot be surpassed in any part of Manitoba.—*J. McAree, D.T.S., 1890.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 18—*Continued.*

Fractional sections 25 and 36 are situated at the northeast corner of Dauphin lake. The surface is level and covered with willow and poplar scrub. The soil is black loam ten inches deep, with sand, stone and clay. The land is marshy along the shore of the lake. The water in the lake is good. Summer frosts are unheard of.—*W. J. Deans, D.L.S., 1908.*

(*South outline.*)—Along this line the soil is a heavy black loam. The land is
29. high along Mossy river, but timbered with large poplar, elm and oak. It is marsh in places. There are a number of scattered bluffs of poplar, tamarack and spruce.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—The land in the western tier of sections is of the very best quality, and though heavily timbered will be taken up at once on account of the great advantages offered by the richness of the soil and its proximity to the Mossy river which runs along the west boundary.—*P. R. A. Belanger, D.L.S., 1896.*

The soil throughout this township is of poor quality consisting of a thin
30. layer of sandy loam with a subsoil of gravel. The surface is covered with large willow swamps, intersected by gravelly ridges. There is no wood of any commercial value. As this country is fairly well sheltered it would be well adapted to ranching. Several streams, containing fresh water, flow through the township into lake Winnipegosis.—*A. F. Martin, D.L.S., 1898.*

(*Ranges 18 and 19.*)—The part subdivided in these townships comprises the two western tiers of sections in range 18, and two thirds- of the two eastern tiers of sections in range 19. The surface is generally low, burnt country and is very marshy on the west side of Mossy river, which runs in a northerly direction across the western half of range 18. On the east side of the river, though the country has been overrun by fire, there is still a great quantity of dry and green timber. The soil of the high land is of very good quality and is well adapted to mixed farming, especially does this apply to the land along both banks of Mossy river; the remainder of the land is better adapted to stock-raising. Large quantities of hay can be obtained in both townships. Mossy river is a stream averaging about 200 feet in width and varying in depth from three to twelve feet, with a slow current and a sandy or stony bottom.—*P. R. A. Belanger, D.L.S., 1895.*

Lake Winnipegosis occupies the northeast portion of this township, and also
31. encroaches on section 31. Red Deer point, a peninsula which projects from sections 31, 32 and 33 extends northerly for twenty-four miles. A small lake of about a mile and a quarter in length, and containing salt water, occupies part of sections 4, 5, 8 and 9. The remainder of the township may be described as a low, marshy country intersected by scrubby ridges running nearly parallel to the lake. The soil of the ridges is good, and may be rated as second-class. This township is better adapted to stock-raising; however, mixed farming can also be carried on with advantage in the immediate vicinity of lake Winnipegosis, as well as along Mossy river where the land is a little higher. Mossy river enters the township in section 3 and empties into lake Winnipegosis in section 2. This stream varies in width from two and one-half to four chains and is from four to ten feet deep. A salt well is operated in section 16.—*P. R. A. Belanger, D.L.S., 1896.*

(*North outline.*)—In this township the line crosses Red Deer point, a long
32. narrow peninsula extending about eighteen miles north of the line into lake Winnipegosis. On this point the line passes through poplar and spruce up to

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 18—*Continued.*

fourteen inches in diameter. Most of the spruce of any value however has already been removed. There are also many hay marshes, and a small lake is crossed in section 32. The line crosses Fullers bay on the north boundary of sections 33 and 34 and reaches the western shore of lake Winnipegosis proper on the north boundary of section 35. The soil is black loam on clay subsoil.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—The land in this township is very poor. Where it is not an irreclaimable marsh or beaver meadow it is a mass of stones. It is composed of the south part of what is known as Red Deer point, a peninsula of about two miles in width extending about twenty-four miles north into lake Winnipegosis. There is a considerable quantity of timber, consisting of poplar, balm of Gilead, some small oak and an occasional spruce. There are numerous large hay meadows, where several hundred tons may be cut each season. There are a number of small ponds, every one of which is strongly impregnated with salt, so much so that in my opinion the whole township is underlain with salt. Previous to the construction of the Canadian Pacific railway, the Hudson's Bay Company manufactured salt here for their own use. The township is first-class for dairy farming.—*J. Dickson, D.L.S., 1897.*

These townships form part of the long promontory known as Red Deer **32 & 33.** point, in lake Winnipegosis. There are a few local logging and hay trails but no through road in these townships, which, however, are easily accessible by boat from Winnipegosis station, on the Canadian Northern railway, which is about ten miles southerly from the north boundary of township 32. The soil consists of black loam from four to eight inches deep with a gravelly subsoil, and is second-class. The surface is almost uniformly level, being only a few feet above the level of lake Winnipegosis, and is for the most part covered with timber, although there are large tracts of open hay meadow and marsh. The timber consists principally of poplar and birch, from four to eight inches in diameter, but there are thick spruce woods in sections 4, 5, 10, 20 and 21 of township 33, and part of section 31 in township 32, which, although most of the valuable timber has been cut by lumbermen, it will again be valuable in twenty or thirty years time; it is also worthy of note that most of township 33, is well seeded with young spruce, growing through the poplar and birch woods, which gives this land a prospective value as a timber reserve. There are considerable tracts of hay land throughout these townships; the hay is principally slough hay and grows in big alkaline marshes which frequently degenerate into reed beds wherever the surface happens to be a little lower than the average, so that water overlies the surface all the year round; there is a particularly large marsh of this kind running through the easterly half of sections 16, 21, 28 and 33 and the westerly half of section 34 in township 33, besides a number of smaller ones scattered throughout both townships, on which Icelandic and half-breed fishermen put up large quantities of hay during the summer months. The water of lake Winnipegosis, which is beautifully clear and wholesome, is available for all needs of settlers and stock throughout these townships, besides, there are a number of interior lakes, which, however, seem to be either saline or alkaline. There are no water-powers in these townships, and I saw no evidence of the existence of coal, minerals or quarrying stone. There is an abundance of moose, elks, jumping deer and bears throughout all this region, which, moreover, cannot be excelled for wild-fowl shooting, and lake Winnipegosis abounds with fish. There is an unusually heavy rainfall in this district, due to the low-lying character of the land and the near presence of immense tracts of open water. There are several Icelanders squatting along the shores in township 33, but their real occupation is fishing, and the only farming they attempt is confined to planting a small patch of potatoes and putting up hay from the marshes.—*R. W. Cautley, D.L.S., 1908.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 19.

(*East and south outlines.*)—Along the eastern boundary the land is rolling
17. and covered with poplar and willow. The soil is a good sandy loam. There are many small lakes. On the southern boundary the country is more open, with groves of poplar.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is well timbered with poplar, white birch, grey willow and a few spruce, averaging from four to fifteen inches in diameter. The soil is good loam, with a subsoil of clay. There are numerous lakes and muskegs. Whirlpool river runs through the easterly part, affording good mill sites.—*W. Burke, D.L.S., 1874.*

(*North and east outlines.*)—Along the eastern boundary the surface is undulating, and timbered with poplar, spruce and tamarack with a considerable amount of willow brush. The soil is a good sandy loam. On the northern boundary there are several spruce and tamarack swamps and small lakes. The soil is also of good quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is well watered by two large lakes and several small ones, and also by Whirlpool river and a few small brooks. The township is heavily timbered with poplar, white birch, spruce and larch, in the low lands. The timber ranges from four to fifteen inches in diameter. The soil is good, being loam on top, with a yellow clay subsoil.—*W. Burke, D.L.S., 1874.*

(*East and south outlines.*)—Along the eastern boundary the surface is rolling, and covered thickly with poplar, spruce and willow brush. It is marshy in many places. There are two small creeks flowing across the boundary. A portion of Clear lake in which the water is good and the shore high, lies in the north-eastern part of the township. Along the southern boundary the surface is timbered with poplar bush and a thick undergrowth of willow. There are a number of small willow swamps. The soil is of second and third-class quality. There is a portion of a fine lake in section 5 which extends about four miles in a northerly direction.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—There are three lakes in this township fringed with woods. The soil throughout is excellent, but the low lands are marshy.—*G. Stewart, D.L.S., 1880.*

(*North outline.*)—The land along this boundary is of a similar character to
20. that on the eastern. There is a lake in sections 32 and 33.—*J. L. Reid, D.L.S., 1874.*

(*East outline.*)—The surface along this line is rolling, and covered with poplar, scattered spruce and willow scrub. The soil is second- and third-class.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—The western and northern portions of the township are covered with a thick growth of heavy timber, principally poplar and spruce; the centre and southern portions down to Clear lake are covered with a thick underbrush of small poplar, spruce, willow, hazel, etc. The soil throughout is first-class.—*G. Stewart, D.L.S., 1879.*

(*North outline.*)—The surface along this boundary is rolling, with occasional knolls and deep ravines. The knolls are from twenty to 112 feet in height. There are several creeks with water-power sufficient to drive a sawmill. The country is timbered with poplar, spruce, white birch and tamarack. The soil is of third-class quality.—*W. Ogilvie, D.L.S., 1875.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 19—*Continued.*

(*North outline.*)—The surface along this outline is mostly covered with

24. scrubby poplar and willow, with scattered bluffs of poplar and occasional spruce swamps and marsh. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—The Vermilion river, about one chain wide, enters this township in section 19 and leaves it in section 32. Edwards creek, about twenty feet wide, enters it in section 4, and running in a northerly and easterly direction, leaves it in section 36. Both streams furnish an abundant supply of water at all seasons of the year. The soil along the rivers is a rich black loam averaging about two feet in depth. The township is well timbered with poplar, elm and oak, the poplar averaging eight to twelve inches in diameter, the elm from ten to eighteen inches, and the oak ten to twenty-four inches. It is fairly well adapted to agricultural purposes.—*J. McLatchie, D.L.S., 1884.*

(*East outline.*)—The eastern boundary is alternately poplar and willow bluffs

25. and prairie, with small willows and occasional hay marshes. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

(*Subdivision.*)—The township is traversed by two rivers, averaging about one chain wide, which contain an abundant supply of good water. The banks of these rivers are about twenty feet in height. The township presents a level surface and is covered with a growth of poplar, oak, elm, maple, ash and willow; in a belt about half a mile wide along the banks, the poplar, oak and elm average from ten to fifteen inches in diameter. Wild hops, pea-vine and vetches grow luxuriantly and are profusely scattered throughout. A small portion of the township is composed of hay land. The soil is a rich black loam, averaging eighteen inches in depth, with a clay subsoil.—*J. McLatchie, D.L.S., 1884.*

(*East outline.*)—The country along this line is alternately poplar woods and

26. windfall grown up with willow and small poplars. The soil is of second-class quality. Valley river flows easterly through section 36, and has an average depth of three feet. There is another stream running easterly through section 1.—*E. Bray, D.L.S., 1875.*

The soil is a light sandy loam, well adapted to mixed farming, having large tracts of hay land. It is well covered with timber, principally poplar which is suitable for building purposes. The township is well drained by Valley river.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—The township is nearly all good undulating land, with a rich sandy loam soil. The Valley river is a fine clear stream, varying from two to three chains in width. Most of the timber in the township has been killed by fire.—*W. Beatty, D.L.S., 1887.*

The part surveyed by me comprises the two western tiers of sections, sections 28 and 33, and the northern boundary of the township. The surface is flat, excepting the slopes along Valley river. South of that stream the soil is good, although light in some places, it being, in general, a sandy loam with a sandy subsoil. Most of this area has been repeatedly swept by fire, which has killed all the timber and made extensive openings in the woods. Another good fire will render the whole ready for the plough. North of Valley river the soil is generally of poor quality, consisting of a thin layer on a substratum of small boulders, mostly flaggy limestone, which are coated not unfrequently with a thick film of black mud. The timber in this part of the township has been nearly all killed by fire. It consisted of small-sized poplar, with willows, making

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 19—*Continued.*

in general a very thick woods. There is a good deal of grass and wild vetches through the woods. There is a small quantity of green timber along the valley of the river, and in sections 17 and 18.—*J. McAree, D.T.S., 1890.*

(*East outline.*)—The country along this line is covered with a dense new
27. growth of willows and small poplar, excepting in sections 25 and 36, where there are heavy poplar woods. The land is good, and of second-class quality.—*E. Bray, D.L.S., 1875.*

The soil is a light sandy loam. The land is low, with large marshes, but the ridges are well covered with poplar. The eastern half is well adapted to agricultural purposes.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—This township is easily reached by the Canadian Northern railway which runs about half a mile to the west. A great percentage of the west half of the township is low and marshy land and is better adapted to stock-raising than to farming purposes. The east half is with very few exceptions good for general farming purposes, and is rated as first-class. Two small streams of good water run easterly across the north half of the township, but these creeks carry water only in the wet seasons or early in the spring. Along both of them are found deep holes where water can be obtained almost any time.—*P. R. A. Belanger, D.L.S., 1896.*

(*East outline.*)—This boundary is covered alternately with poplar woods, with
28. dense growth of willow, and poplar windfall with a dense growth of young poplar and willows. The soil is of second-class quality.—*E. Bray, D.L.S., 1875.*

The soil is a light sandy loam. The land is low except in the north tier of sections, which is well suited for agricultural purposes, but heavily timbered with large poplar. The timber in the centre of the township is poplar, with scattered spruce and tamarack.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—The general aspects of the country in the west half of this township is that of a burnt country with a few scattered dry and green poplar and a thick undergrowth of scrubs, while in the east half it is generally heavily timbered. The soil in the east half is of the best quality and is well adapted to all purposes, but on the west half it is generally classified as second- and third-class. Four small streams run easterly across the township, and empty into Dauphin lake. The trail from Mossy river to Dauphin lake crosses sections 32, 31, and 30. There is a station on the Canadian Northern railway about thirty chains west of the southwest corner of the township.—*P. R. A. Belanger, D.L.S., 1896.*

(*East outline.*)—The soil of the country along this line is a sandy loam. The
29. land is high along the banks of Mossy and Fork rivers and is well suited for agricultural purposes, but is timbered with large elm, oak and poplar; the remainder of the township is low and marshy with bluffs of poplar, spruce and tamarack.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—The east half of this township is, with the exception of the two northern tiers, timbered throughout, but a large percentage of the timber has been killed by fire. The north boundary of the township in the east half of the range runs through scrubby prairie or brulé, but on the west half there is green or dry timber with scrub. Many hay marshes are found, where large quantities of good hay may be cut. Two streams of fine water, the Fork river and the Fishing river, flow through this

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 19—*Continued.*

township in an easterly direction, emptying into the Mossy river which runs along the east boundary in a northerly direction. The soil in the east half of the township is good and is well adapted to mixed farming.—*P. R. A. Belanger, D.L.S., 1895.*

Fork river crosses the northern portion of this township. The Canadian Northern railway passes through sections 4, 9, 10, 15, 23, 26, and 36. Fork River station is in section 26. The soil, as a whole, is of fair quality, but is rather light along the Fork river in section 30. The wood consists of second-growth and some larger poplar, but there is no timber of any commercial value. Several settlers are occupying lands, especially along the Fork river. The land along Fishing river, which runs through sections 6, 5, and 4, is of very good quality.—*A. F. Martin, D.L.S., 1898.*

The western part of this township contains good spruce and tamarack, well
30. suited for building material. Throughout the remainder of the township the timber is of the usual varieties peculiar to this country and is, although small, so dense as to make the opening out of lines exceedingly slow work. There are many beaver meadows, but in the part surveyed the hay is poor, the land being very wet. A small stream, containing water of good quality, flows from the south. The land is generally poor, being either stony or muskeg, and could not be rated above third-class.—*J. Dickson, D.L.S., 1898.*

In this township we subdivided only the east half, which was considered
31. desirable for settlement. As to the west half, the western row of sections is unfit for settlement, and the remainder is heavily timbered and somewhat stony. The soil in the east half is in general very good for mixed farming, more especially in the northeast quarter, where lake Winnipegosis encroaches on section 36. This lake affords a good supply of both hay and water. Two small creeks flow through sections 23, 24, 25, 26, 34 and 35 and empty into the lake in section 36. A large muskeg and hay marsh occupies the greater part of sections 1, 12, 13, and 14. This marsh, which extends over six miles southerly, furnishes large quantities of hay for the settlers along Mossy river. The west boundary of this township runs through a low country covered with small dry spruce and tamarack intermixed with willow scrub and heavy windfalls. There are many large muskegs, intersected occasionally by small ridges covered with green spruce and poplar of medium size. The soil along this line is poor, being sandy and stony.—*P. R. A. Belanger, D.L.S., 1896.*

(*West third.*)—The country is level and thickly covered with small poplar, willow, alder, and heavy windfalls. There are a few scattered clumps of poplar, spruce, and tamarack from three to twelve inches in diameter. The land is of no value agriculturally, as it consists of wet muskegs and swamps.—*J. C. DesMeules, D.L.S., 1900.*

(*North outline.*)—The greater part of the line in this township falls in
32. Sagemace bay, a portion of lake Winnipegosis separated from the main lake by Red Deer point. Along the shore of the bay is a strip of hay marsh. Back of this is a narrow strip of heavy poplar bush and back of this again is small poplar and willow with hay meadows and sloughs.—*W. Christie, D.L.S., 1907.*

(*Subdivision.*)—The west boundary of this township runs through a low country covered with dry spruce and tamarack intermixed with heavy windfalls. The surface is broken by numerous large muskegs intersected by ridges. Small groves of poplar and spruce suitable for building purposes are found in the north half of section 12, and also in the south half of section 13 of the township to the west. The east half of the township is generally fair land and offers some advantages for mixed farming but is better adapted to ranching on account of the great quantity of hay which grows

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 19—*Continued.*

in the neighbourhood of lake Winnipegosis. Several salt lagoons and springs are found at a short distance from the shore. The soil is rated as third- and fourth-class along the west boundary, but in the east part of the township it may be rated as second-class.—*P. R. A. Belanger, D.L.S., 1896.*

RANGE 20.

This township is all heavily timbered, principally with poplar of large size,
17. particularly in the northern part. Here and there are patches of grass land.

The soil is of second-class quality. The surface of the township is much broken by numerous small lakes.—*J. Holmes, D.L.S., 1873.*

(*Correction Survey.*)—Brulé and windfall covers the most of this township. The soil is all of first-class quality. The township is well suited for settlement.—*J. Vicars, D.L.S., 1888.*

(*North outline.*)—Along the northern boundary the country is rolling, and
18. covered with large poplar and a dense undergrowth of willow and hazel. There are also a few white birch. There are numerous small lakes, and the soil is a good sandy loam.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—The township consists of lakes and woods, the latter containing very heavy timber. The soil is excellent, but everywhere densely covered with timber and brush.—*J. Doupe and A. McFee, D.L.S., 1880.*

The Neepawa-Rossburn branch of the Canadian Northern railway passes through the southern portions of this township. The station of Sandy Lake is in section 9. The northeast quarter of the township is taken up by Riding Mountain forest reserve. The surface of the remainder is much broken by many small knolls and hollows and numerous sloughs and lakes, one of which, locally known as Sandy lake, is over three miles long and more than a mile wide in places. The soil is mostly clay, with three to six inches of black loam, and is better adapted to the growing of oats, barley, and vegetables than wheat. Most of the sections in the township are taken up by Galician settlers, and there are two stores and a post office near the station of Sandy lake. The country south and west of Sandy lake is covered with fire-killed poplar, birch, and willows and a considerable quantity of green poplar suitable for fencing and cordwood. Sections 2, 12, 13, and 14 are well timbered with green poplar and a few birch from ten to twenty-four inches in diameter, which would be suitable for sawlogs. There was a portable sawmill in section 10 last winter, which was in operation for the benefit of the settlers in the district. Good hay can be obtained in large quantities in the numerous sloughs and on the shores of the lakes. The water in the lakes is generally good. The most important stream is the outlet of Sandy lake, which drains the western part of the township and empties into the Minnedosa river in range 21. There are no water-powers. The climate is similar to that of eastern Manitoba. There are no quarries, minerals, nor coal in this locality. There was practically no game in the district.—*P. T. C. Dumais, D.L.S., 1907.*

This township is settled and the land is being rapidly cleared of the bush. The farmers are doing considerable mixed farming.—*G. A. Bennett, D.L.S., 1912.*

(*South outline.*)—The land along this line has a rolling surface timbered
19. with heavy poplar bush, a few scattered birch and thick underbrush. There are many small ponds and hay marshes.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—This township is covered with a heavy growth of poplar, spruce and birch. There are numerous small lakes, marshes, muskegs and sloughs scat-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 20—*Continued.*

tered throughout and the soil is rich. The Hudson's Bay company have a mill about nine miles away and sawlogs could be floated down to it on a stream locally called Coldwater creek.—*G. Stewart, D.L.S., 1880.*

(*North outline.*)—The land along this line is nearly all covered with poplar, **20.** spruce and high willows. There is some fine prairie land in sections 32 and 33 and there is a creek running in a westerly direction through sections 33 and 34.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—This township is composed of woods and swamps with occasional prairie patches of good soil, and is pleasantly situated. The timber is heavy, and lumbermen have already been attracted to this township. A stream, locally called Clearwater creek, affords a connection with Minnedosa river.—*G. Stewart, D.L.S., 1879.*

(*North outline.*)—The surface is very hilly in sections 31, 32 and 36. The **22.** whole township is covered with poplar, spruce, birch and willows. There are a number of small meadows. A river from fifty to one hundred feet in width flows in a northerly direction through section 31, and a creek southwesterly along the northern boundaries of sections 32 and 33; its banks are from 150 to 250 feet high. The soil is of second- and third-class quality.—*W. Ogilvie, D.L.S., 1875.*

(*East outline.*)—The land along this line is heavily timbered with poplar, **23.** some birch, spruce and tamarack, with a dense underbrush, there being no openings or meadows of any size. Vermilion river enters the township about fifteen chains from the southwestern corner and flows northeasterly. The valley of the stream is not more than thirty feet deep where it enters the township, but is nearly 200 where it leaves it, at the northern boundary. The soil is all that any person could desire and every inch of space seems to be taken up with a growth of some kind.—*T. Fawcett, D.T.S., 1890.*

This township is divided into two parts by the slope of Riding mountain **24.** which runs diagonally through it. The northeastern part is low land which rises rapidly to the southwest, forming a high undulating plateau. The plateau is covered with a heavy growth of poplar, greatly damaged by fire, which has burnt some sections to such an extent as to leave them ready for cultivation. In the centre of the burnt district, good crops are grown at present by squatters. Numerous hay meadows are found on the plateau. The land lying below the plateau is partly covered with bluffs of poplar and with scrub, most of which is burnt. The soil throughout consists generally of about twelve inches of black loam on a clay subsoil, and is well watered by numerous small streams. Plums, gooseberries and red and black currants grow in a wild state.—*J. E. Woods, D.L.S., 1890.*

The banks of the Wilson river are about twenty feet high at the eastern **25.** boundary, and increase to about eighty feet at the western. There is a dense growth of poplar, oak, elm, ash, maple, and willow, intertwined with wild hop-vines, in a belt of about half a mile wide along the banks of the river. Clumps of poplar and willow are found throughout the rest of the township. The soil is a rich black loam, averaging about eighteen inches in depth.—*J. McLatchie, D.L.S., 1884.*

(*Outlines.*)—The soil is a light sandy loam, well adapted to mixed farming. **26.** having large tracts of hay land. It is well covered with timber, consisting of poplar with scattered spruce, suitable for building purposes. The township is well drained by Valley river.—*W. N. Small, D.L.S., 1887.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 20—*Continued.*

(*Subdivision.*)—The part of the township south of Valley river is more or less open country, with bluffs of poplar of small size, willow and scrub, most of which have been killed by fire. The soil is a loam or sandy loam of very good quality, almost, if not entirely, free from stones. The timber and brush in any quarter-section could easily be removed, and then the land would be first-class. North of Valley river the soil is a loam or sandy loam, but in the northeastern part the soil is rather shallow with a subsoil of gravel. This part (north of the river) is thickly wooded with poplar and willow, the latter forming a very dense growth in some parts. Except in the westerly and northern tier of sections the timber has all been killed by fire. In the green poplar woods there is a good deal of timber large enough for building purposes. Along Drifting river there are a number of clumps of spruce trees. The Valley river has a strong current almost everywhere and the banks which are from six to ten feet high are composed of drift clay and boulders. Generally throughout the township the soil is of first-class quality.—*J. McAree, D.T.S., 1890.*

- (*Outlines.*)—The soil is a light sandy loam and the land is low with marshes.
27. The ridges are covered with poplar. The western half is suitable for agricultural purposes.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—The soil throughout this township is nearly all sandy loam with a subsoil of sand. The whole of the two eastern tiers of sections may be rated as first-class, with the exception of the east half of sections 25 and 36, which have been rated second-class. The country west of these two tiers has been rated as either second- or third-class, but there is scarcely a quarter-section that would not make a fairly good farm. At the time of survey (May) there was an abundance of good water, but there were very few streams. They, as well as nearly all the sloughs, would dry up as soon as the hot season sets in. Good water can be obtained all over the township at a depth not exceeding fifteen feet. There is a small pond in the northeast quarter of section 25, one in section 27, one crossed by the eastern boundary of section 17, and one crossed by the northern boundary of section 35. They all contain good water and do not dry up in the summer months. The township has been nearly all burnt over. There is no prairie. Only a few small areas of poplar and balm of Gilead, about six inches in diameter, have escaped the fire, and there is no timber of commercial value. The northwest and western parts were burnt over again about a year ago. The sloughs and meadows are nearly all well covered with patches of scrub willow. The surface of the country varies from level to slightly undulating. The Canadian Northern railway runs due north at a distance of a little less than half a mile from its eastern boundary; Sifton station is in the northeast quarter of section 36.—*J. Dickson, D.L.S., 1897.*

- (*East outline.*)—The soil is a light sandy loam. The land is low with gravel
28. ridges covered with large poplar. The low land is marshy with bluffs of poplar, spruce and tamarack.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—This township is better adapted to grazing than to farming. There are several sections of first-class land but, as they are scattered in different parts of the township, settlement is not likely to be so rapid as it would be if all the good land were in one block. The soil is generally sandy loam, with gravel on the higher ridges. There are several creeks which contain water of good quality, Mink river being the largest. The principal branch enters the township a few chains south of the northwest corner of section 19, and, after spreading out into a number of small streams, or losing itself in muskegs, its various ramifications unite again before leaving section 23, and it crosses the east boundary in section 24 as a fine, large creek of excellent water. The central and northeastern parts are largely cut up by muskegs

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 20—*Continued.*

and beds of alkali. Scattered through these there are patches of first-class land, which are fairly well timbered with poplar and balm of Gilead. In the southeast quarter there are several large meadows which produce good hay. The township contains no open prairie, but except in those parts surrounded by muskegs or alkali beds, it has all been burnt over and is now covered with scrub, the only timber left. There is a large block, perhaps fifty acres in area, in the west half of section 34, containing fine spruce as large as fifteen inches in diameter. There is another block in section 30. It is advisable that all this timber be kept for the use of the settlers. There were none in the township, but a few Galicians began erecting huts in the southeast quarter while the survey was being carried on. The Canadian Northern railway, which enters the township in section 1 and leaves in section 24, was constructed last season. The wagon trail from Dauphin to Pine river and Mossy river also enters the township a few chains north of its southeast corner and leaves it near the middle of section 25.—*J. Dickson, D.L.S., 1897.*

(*Outlines.*)—The soil of this township is composed of a sandy loam. The
29. land is generally very low, with many gravel ridges, which are covered with heavy poplar. The low land consists of muskegs or marshes.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—Only the south half of this township was surveyed and, judging from the appearance of the country towards the north, I cannot recommend the subdivision of the north half. There is no open prairie in this township, and no timber of any value. The surface is all muskeg and meadow land covered with scrub timber. In the part subdivided, the soil of that portion which is not muskeg is either yellow sand, gravel or stones, and there were only a few patches which would grade as high as second-class. Fishing river, a stream of fresh water, from ten to fifteen feet wide and from three to five feet deep, enters the township in section 7, flows easterly through sections 8, 9, 10 and 11, and, diverging for a short distance into section 14, turns southeast and leaves the township near the southeast corner. Besides that stream there are several small creeks and some ponds. The water is of good quality and plentiful. The township as a whole appears to be well adapted to ranching.—*J. Dickson, D.L.S., 1897.*

(*North half.*)—The south half of this township was subdivided in 1897. The north half is a generally level tract of country covered with poplar, willow, alder, and scattered clumps of spruce and poplar from four to ten inches in diameter. There are a few small hay meadows or marshes of little value. This portion of the township is watered by the Fork river. The land is second-class and consists of an alluvial soil of black loam, about eight inches deep on a clay loam; it is fairly well suited for farming. There is no timber of any consequence in the north half of this township. In some places there are clumps of spruce and poplar from four to ten inches in diameter, but they are very limited in extent and, while serving well for settlers' use, are of little value for any other purpose. Most of the sections open for settlement have been taken up by Galicians who have but recently moved in and, in some cases, are just beginning operations. They will in time prove good settlers and law-abiding citizens.—*J. W. FitzGerald, D.L.S., 1900.*

(*East outline.*)—This line runs through a poplar bush, interspersed with
30. spruce and tamarack, and alternating with patches of brûlé thickly overgrown with high scrub. Large swamps are crossed in sections 1 and 12; another large swamp or muskeg, varying from twenty to forty chains in width, lies along the whole length of the township at a distance of about thirty chains east of this line. The soil is rated second- and third-class, and cannot be considered fit for settlement.—*P. R. A. Belanger, D.L.S., 1896.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 20—*Continued.*

(*Subdivision.*)—This township comprises a level tract of country covered with small poplar, willow, alder, and scattered clumps of spruce, jackpine and poplar from four to ten inches in diameter. The land is rated second-class and consists of an alluvial soil of black loam from four to twelve inches deep on a clay subsoil. It is fairly well adapted to general farming. A tributary of the Fork river crosses the southwest corner of the township, and is the only stream of any importance. It is about twenty-five feet wide and two feet deep, and flows with a slow current between banks from six to eight feet high. The Mossy River trail crosses the southwest portion of the township, passing through sections 3, 4, 5, and 7. It is a good trail and connects this township with the village of Ethelbert on the Canadian Northern railway, distant about six or eight miles. The township is, therefore, easily accessible for settlement. Although there were no settlers in this township at the time of survey, parties of Galicians were looking over the land with a view to settling.—*J. W. FitzGerald, D. L.S., 1900.*

(*East outline.*)—In section 1 this line runs over an open muskeg which
31. extends in a northerly direction. It then crosses a small ridge diagonally and enters a large spruce and tamarack swamp which, though wet in section 1, is dry to the north where the fire has killed all the timber. A large muskeg, measuring about six chains wide, is also crossed in section 36. This muskeg appears to be the same one crossed in section 1 which extends northerly at a short distance west of the line. The remainder of this outline runs over a low country covered with small dry spruce and tamarack, intermixed with willow scrub and heavy windfalls and intercepted occasionally by small ridges covered with green spruce and poplar of medium size. The soil is poor, being sandy and stony.—*P. R. A. Belanger, D.L.S., 1896.*

(*Subdivision.*)—This township is generally level or undulating and covered with small poplar, willow and alder, with large tracts covered with spruce and tamarack. There are also large areas of partly open muskeg covered with windfall and willow. The land is second and third-class, about one-fourth being second-class, with an alluvial soil of black loam about seven inches deep on a clay subsoil. The third-class land consists of an alluvial soil of black loam, partaking somewhat of the character of muck, varying from three to ten inches in depth, on a subsoil of sandy loam, gravel, or sand. This township cannot be recommended for settlement, there being no trail through or near it. With such a large area of better land easily accessible and open for settlement in the vicinity, this township will remain in its present state for some time to come. A small stream called Point river crosses the northwest corner of the township. There are large tracts of spruce, tamarack, and partly open muskeg. The spruce and tamarack in the muskegs are seldom over eight inches in diameter, and usually unsound, especially the tamarack. There is no timber worth mentioning, with the exception of a clump of good spruce from ten to fourteen inches in diameter extending southerly along the line between sections 31 and 32, and covering about one hundred acres.—*J. W. FitzGerald, D.L.S., 1900.*

(*North outline.*)—Running westward across this range, the 9th base line
32. crosses a gently rolling, burnt country, overgrown with scrub, interspersed with bluffs of poplar and spruce, and much broken by willow and tamarack swamps. Point river and a small creek are intersected in section 34. Another small tributary of Point river is crossed in section 33. The soil is rated second- and third-class.—*P. R. A. Belanger, D.L.S., 1898.*

(*East outline.*)—This line runs through a low country covered with small dry spruce and tamarack intermixed with heavy windfalls. There are numerous large

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 20—*Continued.*

muskegs intercepted by small ridges. Small groves of poplar and spruce, suitable for building purposes are seen in the north half of section 12 and the south half of section 13. The soil is rated third- and four-class, and is certainly unfit for anything in the immediate vicinity of this line.—*P. R. A. Belanger, D.L.S., 1896.*

(*Subdivision.*)—For descriptive purposes this township may be divided into three parts. The first part is that lying north of the north boundaries of sections 19, 20, 21, 22, 23, and 24, and comprises one-third of the township. This tract of country is of a rolling character, covered with small poplar, jackpine, and willow, and interspersed with spruce and tamarack swamps. The soil is third-class, consisting of black loam or muck from two to eight inches in depth on a subsoil of clay, sandy loam, or sand. The second part lying south of the north boundaries of sections 19, 20, and 21, and west of the east boundaries of sections 4, 9, 16, and 21, is an undulating country covered with poplar, willow, and scrub. The soil is third-class, consisting of black loam or muck about four inches in depth with a subsoil of clay, sandy loam, or gravel. The third part, which lies south and east of parts one and two, is a generally level tract of country covered chiefly with spruce and tamarack muskegs, willow and windfall. The soil is a third-class alluvial soil, consisting of black loam or muck about five inches deep on a subsoil of clay or gravel. Point river runs north through the centre of this township. It is a small stream averaging ten feet in width and fourteen inches in depth and flows with a slow current between banks two to five feet in height. There are no settlers' trails nor woods in the township. There is little or no timber of any account. Scattered in the numerous swamps or muskegs are clumps of spruce and tamarack from four to eight inches in diameter.—*J. W. Fitzgerald, D.L.S., 1900.*

RANGE 21.

(*North and east outlines.*)—Along the northern boundary is found generally
17. an open undulating prairie with brush in many places and gravel ridges here and there. The soil is a sandy loam. Along the eastern boundary the country is much the same, excepting that there are numerous bluffs of poplar from section 13, northwards, and also several lakes.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—About one-third of this township is undulating prairie, one-sixth burned woods, with undergrowth of various kinds, and one-half wooded with a fine heavy growth of poplar, fit for fuel and building purposes. The soil is first-class, except on the high and dry banks of the Minnedosa river which flows through the easterly part of the township.—*D. Sinclair, D.L.S., 1875.*

(*North and east outlines.*)—The country along these lines is much broken
18. up by numerous small lakes. The surface of the land is nearly covered by brush, principally poplar, much of which has been burnt. The soil is a sandy loam of good quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—About one-fourth of the township is partial prairie, with scrub willow, etc.; the other three-fourths is covered with large poplar, in many places scorched by fire. There are a good many fresh-water lakes in the northwestern quarter and a beautiful clear-watered and sandy-beached lake at the northeastern corner. The Minnedosa river flows through the easterly part. The soil is first-class everywhere.—*D. Sinclair, D.L.S., 1875.*

This township can be reached by the Rossburn branch of the Canadian Northern railway, which passes through it. The soil is a deep rich loam underlaid by a good

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

clay subsoil, and should be suitable for mixed farming. The surface of the township is rolling and much broken by lakes and sloughs in the northern and western parts. Most of the sections have considerable scrub and some large timber as will hereinafter be described. Very little hay occurs in this township excepting on the river flats. Minnedosa river flows southerly through sections 34, 9, 8, 5 and 6 and the Indian reserve in the central part of the township. The water of this river is fresh. Several small fresh-water creeks flow out of some of the sections into this river. The water in Fishing (local name) and Dalmas lakes is slightly brackish, while in nearly all the other lakes the water is quite salty. The fuel used is poplar timber and can be obtained in sections 17, 18, 19, 20, 29, 30, 31, 32, 35 and 36, while more or less timber can be secured from almost any of the other sections. No water-powers occur. No stone-quarries nor indications of minerals were noticed. The climate seems to vary, for while east of Minnedosa river no summer frosts are reported, west of it frosts do occur. Partridges, wild ducks, and some moose were seen. Poplar timber measuring up to fourteen inches in diameter was found in different parts of sections 17, 18, 19, 20, 29, 30, 31, 32, 33, 35 and 36. Section 1 is rolling land and scrubby, and is broken in the east half by a lake. Section 2 is broken in the north half by lake Dalmas, but the rest of the section is cultivated land. Section 3 is rolling land covered with scrub, the northwest corner of which is partly cleared and cultivated. Section 4 is partly cleared and cultivated but is broken to a good extent by lakes and sloughs. Sections 5 and 6 are broken by Minnedosa river. Good hay occurs in the river flats. The southwest quarter and the north half of section 6 and part of the northwest quarter of section 5 is cultivated land. The south half and the northwest quarter of section 7 is also cultivated land. The northeast quarters of sections 7 and 8 are more or less open. Section 8 is broken in the southeast quarter by Minnedosa river as is also section 9 in the west half but the latter is mostly cleared and partly cultivated land. The south halves of sections 10, 11, 12 and 13 are rolling and scrubby, while the northwest quarter of 12 is partly cleared and the south half of section 24 is mostly cleared and cultivated. The north half of section 24, east half of section 23 and parts of sections 25, 26, 35 and 36 are broken by Fishing (local name) lake, but the west half of 26 is mostly cleared and cultivated. Large poplar timber occurs in sections 35 and 36, and section 34 is broken by Minnedosa river. The west halves of sections 17, 20, 29 and sections 19, 30, 31, 32 and 33 are very much broken by salty sloughs and lakes. These sections are very scrubby and some large timber occurs in them. Section 18 is rolling and covered with scrub. There is a trail on both sides of Minnedosa river leading northerly and southerly out of the Riding Mountain Indian reserve. Another trail leads through sections 23, 24 and 25 into the township to the east. There is another trail winding through sections 19 and 30 to the Galician settlement, in the northern part of the township to the west. The Canadian Northern railway leads through sections 13, 14, 9, 8, 5 and 6.—*L. T. Bray, D.L.S., 1905.*

This township is covered with scrub and brulé, which can be easily cleared. There is little settlement as yet owing to the deep muskegs and swamps, which render many of the homesteads almost inaccessible. The soil is a sandy loam and when drained should make good farming land.—*G. A. Bennett, D.L.S., 1912.*

(*East outline.*)—A bush of fine heavy poplar and a thick undergrowth of
19. brush covers the country along this line. There is some open prairie in section 2, and the surface of section 3 is rolling and rough. There are a number of small lakes, and the soil is of second-class quality.—*J. L. Reid, D.L.S., 1874.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

(*Subdivision.*)—The greater part of the township is covered with spruce, poplar, birch and a dense undergrowth of hazel, willow and black cherry. The Minnedosa river flows through the two eastern tiers of sections. The soil throughout is inferior.—*A. C. Thomson, D.L.S., 1879.*

This township is situated about fifteen miles northeast of the town of Shoal Lake on the northwestern branch of the Canadian Pacific railway, from which town it is easily accessible by good wagon roads. The new line of the Canadian Pacific railway passes within about eight miles of the southern boundary and will also afford a ready means of access. The soil is chiefly a rich black loam underlain by a clay subsoil and appears to be well adapted to general farming purposes. The township is divided in a northerly and southerly direction into two distinct parts by the valley of Minnedosa river which valley consists chiefly of fine open prairie land. That portion of the township west of the valley is of a very rolling and hilly character, whilst the eastern part of the township is very hilly and broken, some of the hills attaining elevations of 150 feet above the river valley. The greater portion of the original forest on this township has been destroyed by fires and in its place has sprung up a heavy second growth of young poplar. Fragments of the original forest still remain in sections 1, 2, 3, 4, 5, 6, 13, 14, 18, 21, 24, 25, 29, 33, 34 and 36. A small sawmill is located upon the north shore of the lake, in section 24, and to it a few logs are still hauled, chiefly from quite distant points. Nothing of any consequence suitable for milling purposes now remains in the township. Comparatively little natural hay was observed, but the beautiful valley of the river affords an abundant supply of good prairie grass. This township possesses the most abundant supply of good fresh water of any in the locality, both in its numerous large lakes and in the river which traverses sections 36, 26, 23, 14, 11, 10, 3 and 2. Oak (local name) lake covers large portions of sections 4, 5, 8, 9 and 16, whilst another large lake occurs in sections 12, 13 and 24. Numerous other small lakes, many of them of good size, occur in other sections and all of them contain fresh water and most of them contain an abundance of jackfish as well as some other varieties. Although Minnedosa river traverses this township north to south it affords no very considerable water-power so that the sawmill at present being operated in section 24 is run by steam power. This township was surveyed between the 10th and 28th days of March and cold weather was experienced during the greater portion of this time. Good crops were harvested in this locality during the preceding summer and it would, therefore appear that no severe summer frosts were experienced and that the climate was suitable for general farming purposes. There is sufficient standing timber remaining to afford fuel for the settlers for some years to come, although it is to be regretted that the great bulk of it has been destroyed by forest fires. No stone-quarries and no minerals of economic value are known to exist in this township. Several varieties of game are found, including moose, jumping deer, black bears, minks, ducks, prairie-chickens and ruffed grouse.—*J. W. Tyrrell, D.L.S., 1904.*

(*North outline.*)—The surface along this boundary is very knölly and heavily timbered with poplar, spruce, and tamarack; there are also a number of shallow lakes, grassy marshes, and patches of bushy spruce. The soil throughout is a good clay of second-class quality.—*W. Ogilvie, D.L.S., 1875.*

(*East outline.*)—This line crosses a rolling country covered with fine poplar timber. The soil generally is of second-class quality.—*J. L. Reid, D.L.S., 1874.*

(*Subdivision.*)—This township is very heavily timbered, and the central portion is under swamp. Heron creek flows in from the west and after passing through the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

swamp flows on to join the Minnedosa river. The soil is inferior.—*A. C. Thomson, D.L.S., 1879.*

The soil of this township is a black sandy loam on a sand subsoil. The surface is rolling and broken by mostly a poplar and spruce *brulé* with many tamarack swamps. The only hay was found along a creek in section 7. Water is abundant, but no land is liable to be flooded, and no water-power is available. Wood fuel is available in large quantities, but no coal, stone-quarries, nor minerals were found, although surface stone is plentiful. Game consists of moose, deer, bears, prairie-chickens, ducks and geese.—*C. F. Aylsworth, D.L.S., 1910.*

(*East outline.*)—Sections 1 and 12 are hilly and timbered with poplar, spruce, **21.** willow and tamarack; a number of marshy tracts occur in places. Sections 13, 24, 25, and 36 have a gently rolling surface, open grassy poplar woods and a fine loose black clay soil of first-class quality.—*W. Ogilvie, D.L.S., 1875.*

The country in the vicinity of this outline is covered with poplar, balm of Gilead and patches of good spruce. The soil is good, being a vegetable mould about four inches deep underlain by ten inches of black loam; under this is a subsoil of clay.—*T. Fawcett, D.T.S., 1890.*

(*North outline.*)—Sections 34, 35, and 36 have a gently undulating surface **22.** covered with poplar and willow.—*W. Ogilvie, D.L.S., 1875.*

(*East outline.*)—The surface in sections 1, parts of 12, and 13, alternates between poplar woods and prairie. The soil is a fine, loose, black clay of first-class quality. The surface of the remaining portion is very knolly and is timbered with poplar, spruce and tamarack. The soil is of second-class quality.—*W. Ogilvie, D.L.S., 1875.*

The country along this line is mostly covered with timber, principally poplar and scattered patches of spruce. In the northerly part there are several deep ravines, in which are fine spring creeks. The soil is first-class, and the timber suitable for the requirements of settlement.—*T. Fawcett, D.T.S., 1890.*

(*East outline.*)—There is a dense growth of poplar timber along this line **23.** with a thick underbrush of small poplar, hazel, rosebushes and other scrub. Much of the poplar is large enough for the manufacture of lumber. The soil is a black loam of first-class quality.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—In this township a hay swamp crosses sections 23, 27, and 28 and ends in a creek running through sections 29 and 32. This swamp yields a valuable supply of hay for the settlers' use, two of whom have settled in section 32. East of the swamp, with the exception of the eastern tier of sections, the land is covered with fallen timber. The rest of the township is covered with dense poplar measuring up to eight inches in diameter. The soil throughout is a good sandy loam from seven to ten inches deep and good water is easily obtained anywhere by digging.—*A. F. Martin, D.L.S., 1897.*

Sections 12 and 13 of this township are heavily timbered with poplar, ten inches in diameter. The soil is black loam, eight inches deep, with clay subsoil. The surface is gently rolling. A small stream running easterly crosses the east boundary of section 11 and the north boundary of section 12. There is a large hay meadow in section 13. The water is good and building material and fuel are plentiful.—*W. J. Deans, D.L.S., 1908.*

(*North outline.*)—This township probably consists of half woods and half **24.** scrubby prairie, the woods covering the easterly half. The soil, so far as seen, was of excellent quality.—*E. Bray, D.L.S., 1889.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

(*East outline.*)—The eastern half of the township has a sandy loam. The land is rolling and contains a large number of cold springs. The timber is principally poplar, which is suitable for building purposes.—*W. N. Small, D.L.S., 1887.*

(*Subdivision.*)—The surface of this township is undulating and rises rapidly to the southwest. The eastern half of the township is heavily timbered, principally poplar, the most of which, however, has been burnt. The western half is much more open, being mostly a scrubby prairie. There is some good hay land in the northeastern part. The soil is a black loam with a clay subsoil.—*J. E. Woods, D.L.S., 1890.*

(*Outlines.*)—Along the northern boundary the soil is excellent and through-
25. out the remainder of the township good land is plentiful. Along Valley river which flows through the northwesterly portions, some light sandy land is found. Except for a small area in the southwest corner the surface appears to be generally wooded with poplar and spruce. A considerable portion of the timber has been killed by fire.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—This township consists generally of clay loam with belts of sandy loam overlying a subsoil of stony clay or gravel. Valley river runs through sections 30, 32, 33, 34 and 35 in a valley about seventy feet deep and from ten to thirty chains wide. Wilson river flows east in a valley which deepens from fifteen feet in section 7 to eighty feet in section 13. It is about forty feet wide and runs over a bed strewn with boulders. In September very little water was running in the stream, but numerous deep pools of good water were to be found all along its course. In the southern part of section 15 the river runs along the foot of a cut bank about sixty feet high, of black shale containing layers of sandstone. Along the north boundary of section 16 there is a spring containing a large quantity of salt which is deposited on the tufts of grass in a thin coating, resembling frost. South of Wilson river, with the exception of sections 5 and 6, the land is covered with large poplar with considerable *brulé* and windfall and a heavy undergrowth of small poplar. The western portion is mostly covered with willow scrub and scattered dry poplar; a belt of large spruce and poplar extends across sections 19, 30 and 32. The eastern part is about half covered with large willows and large poplar partly burnt. A good trail runs through the eastern and northern parts of the township over which the mail is carried from lake Dauphin to Oaknook.—*J. E. Woods, D.L.S., 1894.*

(*Outlines.*)—The surface of this township is open in the vicinity of Valley
26. river, but throughout the remaining sections it appears to be wooded with poplar and small bluffs of spruce, a large quantity of which has been killed by fire. Valley river and Drifting river run through portions of this township, the former in the southeast and the latter in the north. The soil is of fair quality, except along Valley river where sand is occasionally met with.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—This township was found to be well adapted to settlement. Two parallel gravel ridges about a mile apart run in a northwest direction across this township; they average fifteen feet above the surrounding country and are about five chains in width. To the west of these ridges the soil is a clay loam five to ten inches deep with a gravelly clay subsoil; it is covered with willow scrub and a thick growth of small poplar which has been partly burnt. There are also belts of large poplar towards the northwest corner. Between the ridges the land is low and mostly covered with spruce and tamarack suitable for fencing and building. East of the ridges the soil is sandy loam eight to ten inches deep covered with poplar bush, half killed by fire. The large hay meadows in this part, on account of the porous nature of the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

soil, grow hay only in very wet seasons; most of them could have been cultivated last season, and with a little drainage they will become good farming land. That part of the township which lies south of the Valley river is covered with heavy poplar timber containing some brulé and windfall. There is a good hay meadow extending about three miles along the west side of the gravel ridges. Two or three hundred tons of hay were cut here last season. The Valley river runs through the southeastern part of the township in a valley which deepens from twenty feet in section 13 to sixty feet in section 3. It is a beautiful stream of clear water about a chain wide running swiftly on the gravel bed. The northern part is watered by Drifting river, a stream about twenty-five feet wide supplying good clear water the whole year. Sulphur-spring creek runs through sections 6, 5 and 4 and empties into the Valley river in section 3. The sulphur and salt springs at its intersection with the east boundary of section 5 give the water a very disagreeable taste. It is, however, a favourite watering place for cattle. Brokenpipe lake in sections 20 and 29 is about a mile long and contains good water. The east bank is formed by a gravel ridge; the south and west banks are low and marshy. A very good trail extends across this township in a north-and-south direction along the gravel ridge; another trail runs east to lake Dauphin, and another to Oaknook post office, a few miles distant. Since the survey of this township has been completed most of the land available for settlement has been taken up.—*J. E. Woods, D.L.S., 1894.*

(*East outlines.*)—Along this line the country is low and contains
27, 28, & 29. many large muskegs and marshes, and also several large bluffs of tamarack, spruce and poplar.—*W. N. Small, D.L.S., 1887.*

The east half of this township is gently rolling or level and has been overrun
27. by fires. It is much broken by large swamps extending from north to south across the township, and alternating with small timbered and gravelly ridges. The western portion is densely covered with green and dry poplar alternating with burnt openings. The soil is rated as second-class in the east half and first-class in the remainder. The township is watered by some sloughs and by Drifting river, which enters the township in section 8, flows northerly across sections 16 and 20, and curving easterly and southerly, across sections 21 and 16, leaves the township in section 9. It is a beautiful stream averaging twenty-five feet in width and one foot in depth and contains very good water. Another small stream of good water crosses the southeast part of the township. A well-beaten cart trail, which runs in a northerly direction through the central part of the township, will be found of great advantage to settlers taking up land in this locality.—*P. R. A. Belanger, D.L.S., 1894.*

(*North outline.*)—In the east half of this range the line runs through a
28. low, burnt country with large swamps alternating with small gravelly ridges. The west half is timbered with poplar and scattered spruce, a great part of which is already dead. A large tamarack swamp was entered in section 31. The soil is generally good in the west half, and rated first-class, but as it is somewhat gravelly and low in the east half it has been rated second-class. A well-beaten cart trail, running in a northerly direction, is intersected in section 33; it leads to Pine River Indian reserve which is situated about twenty-five miles to the north on the shore of lake Winnipegosis.—*P. R. A. Belanger, D.L.S., 1894.*

(*Subdivision.*)—This township was at one time entirely timbered, but the recent fires that have raged in this locality have greatly opened the country. Especially does this apply to the vicinity of Mink river which crosses the central portion of this township in an easterly direction, and along which a large belt of bush land has been

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

converted into good hay land. The east half, especially the northern part, is generally low land, and consists of large hay swamps and tamarack muskegs alternating with narrow ridges of green and dry timber extending to the north and south. The west half is somewhat higher and the soil is of a much better quality and more heavily covered with green and dry poplar, principally in the southern part, where no opening can be seen. The soil in this portion is ranked as first-class, while in the east half it is second-class. A well-beaten cart trail runs in a northerly direction through the centre of the township. The Mink river is a beautiful stream, thirty links wide and eighteen inches deep, with good water. It enters the township in section 19 and runs easterly to section 23, where it enters a tamarack swamp, from which it runs out in several small creeks that in all likelihood unite again farther east.—*P. R. A. Belanger, D.L.S., 1894.*

(*West half.*)—Only the west half of this township was subdivided. Judg-
29. ing from the land along the north boundary, the east meridian and the east half of the south boundary, the east half of the township is not adapted to farming but is a good grazing country. Nearly the whole of the two western tiers of sections may be rated as first-class land; the west half of the third tier is a good second-class, while the east half is inferior. A few short stretches of open prairie were found in this township but, for the greater part, it is covered with light scrub and some good spruce and willow along the south and west boundaries of section 6. The land is mostly black clay loam of very rich quality. There is a ridge of gravel, only a few chains wide, extending across the township. It enters a little west of the centre of section 4, on the south boundary, and crosses the north boundary a quarter of a mile west of the northeast corner of section 31. There is a good wagon trail along this ridge. The township is well watered by Fishing river, on the south, and Fork river, a fine, large stream of pure water, on the north. Besides these there are several smaller streams. There are also a number of good meadows. A heavy crop of wild peas, mixed with hay, covered all parts of the township which were clear of growing timber or scrub, at the time of the survey (July).—*J. Dickson, D.L.S., 1897.*

(*East half.*)—The east half of this township was surveyed. It is a level country watered in the south by the Fishing river and in the north by the Fork river. The land is second-class consisting of an alluvial black loam from six to twelve inches deep on a subsoil of clay. It is fair farming land, especially well adapted to root crops. There are some hay meadows and marshes, but they generally contain small willows which detract considerably from their value. Nearly all the quarter-sections held by the Government were taken up lately by Galicians who, from the appearance of their houses, outbuildings and other improvements, evidently intend to remain. The Canadian Northern railway crosses this township diagonally from southeast to northwest. The thriving village of Ethelbert is situated on the railway, in section 31, and gives easy and convenient access to the rest of the township. Under these circumstances the township will in all probability be completely settled and cultivated in the near future. The part surveyed is covered with poplar and willow with scattered clumps of spruce. The poplar is generally very small and useful only for fuel or fencing. Nearly all the spruce of eight inches diameter and greater has been removed for building in the raw state or for manufacture. The remaining timber, which is generally small, is barely sufficient for the use of present and prospective settlers.—*J. W. FitzGerald, D.L.S., 1900.*

(*East outline.*)—This line runs through low, marshy land alternating with
30. small gravelly ridges which are generally timbered with dry poplar or spruce and run northerly nearly parallel to Mossy river, and so preventing the proper draining of this country towards its natural slope. The north channel

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

of Fork river is crossed near the centre of section 1, where it measures twenty feet wide by one foot deep; from this point it turns to the north for half a mile, after which it turns easterly.—*P. R. A. Belanger, D.L.S., 1896.*

(*Subdivision.*)—This township, as a whole, scarcely can be considered other than third-class land, as it is low, level and subject to wet and frost. The surface soil is a black loam, seemingly rich enough, but very shallow, seldom reaching a depth of over six inches. It is underlain, in many cases, by sand and gravel and, where a subsoil of clay does occur it is of a reddish colour, somewhat like pulverized brick mixed with sand. Willow swales, marshes and swamps cover quite a large portion of the central and northern parts of the township. They do not produce hay in any quantity, but wire grass, reeds, and rushes abound. However, quite a few patches of dry land could be selected that would be capable of cultivation and where vegetables could be raised with some degree of success. The south row of sections, particularly sections 1, 2, 3, 4 and part of section 5, present a fairly good appearance. The south half of section 4 is already settled upon. Along the west boundary of the township is a thick growth of spruce, pine, and tamarack large enough for building purposes. The other parts of the township, not taken up with bare swamps, are wooded with tall slender poplar, pine, and a luxuriant growth of willow, amongst the clumps of which a few loads of hay could be obtained by cutting with scythes, but at considerable labour and expense. Although this township is badly broken by swales and swamps, the soil is too shallow for anything like successful farming and cattle-raising, yet there are conveniences and favourable circumstances that should balance, to some extent, the many drawbacks and disadvantages. It is easy of access, convenient to church, school, stores, implement and blacksmith shops, hotel, post office and market, and, above all, adjoining a moderately well-settled neighbourhood. The Canadian Northern railway runs through the southwest part of the township. There is a station and stopping-place at Ethelbert, a small village about half a mile from the south boundary. A train leaves Winnipeg three times a week for Dauphin, Ethelbert, and points farther north, and parties who desire to inspect the district can leave Winnipeg in the morning and reach Ethelbert some time during the same day. Southwesterly, along the eastern slope of the Duck mountains, where the soil is good, the country is settled with well-to-do farmers who are anxious to secure more neighbours, and would, no doubt, readily assist newcomers.—*M. McFadden, D.L.S., 1900.*

The land in this township varies from first- to second- and third-class. The
31. first-class land is mostly in the northeast and southwest corners. The second-class land is mostly in the centre and along the north chord. This township contains the finest quality and largest quantity of hay that was seen in any part of Manitoba. Point river enters the township from the west in the north half of section 7 and leaves it near the centre of section 35. All along the valley of the river the land is good. The Indian trail, leading from Pine River I. R. to the Duck mountains, enters the township in section 33 and leaves it at the west boundary of section 3, passing nearly through the centre of the township. A trail branches from the latter trail in section 28 and, running westerly about three-quarters of a mile north of Garland, connects with the Swan River trail in section 14, township 31, range 22. Both trails are fairly good. There are four young men located in section 27. Their improvements consist of shacks for themselves and stables for their cattle. A half-breed is located in section 28. The land is nearly all covered with scrub, alternating, in a few places, with small groves of jackpine, spruce, tamarack, and poplar. There are only a few trees large enough to be of any value.—*J. Dickson, D.L.S., 1899.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 21—*Continued.*

Sections 1, 2, 3, 4, 5 and 6 are low and wet, covered with willow and poplar scrub with many large hay marshes in which large quantities of hay might be cut, but which are now neglected, the settlers having abandoned their homesteads on account of the country being flooded in wet seasons. The great need of this locality is drainage. If properly drained it would be a great cattle country and would soon be well settled. The water in the marshes is fresh and good. There is some building timber in sections 1 and 6 and an abundance of standing dry trees for fuel.—*W. J. Deans, D.L.S., 1908.*

(*North outline.*)—Section 36 and the east half of section 35 are high, dry, **32.** open land, and the soil is very good. The remainder is generally a rolling, burnt country, occasionally broken alternately by swamps and hills. The latter are somewhat stony, but the soil is fair. Pine river crosses the east half of section 36 in a northerly direction. It is a stream fifty links wide by three feet deep with a slow current. Another small stream empties its waters into Pine river and runs across the west half of this section. The Pine River trail is intersected near the centre of section 36. Creeks of good water are also found in sections 34 and 33. They rise in a large tamarack swamp, lying southwest of the line, which takes its waters from streams draining Duck mountain. The soil ranks second- and third-class.—*P. R. A. Belanger, D.L.S., 1898.*

(*East outline.*)—This line runs through a burnt, scrubby country, slightly rolling or level. The land is rated as first- and second-class, with the exception of section 1 and the south half of section 12, which are covered by a large tamarack muskeg, over which Pine river loses part of its waters and in which Point river rises.—*P. R. A. Belanger, D.L.S., 1898.*

(*Subdivision.*)—Seventy-five per cent of the easterly two and one-half tiers of sections is excellent land. About the same percentage up to within one and one-half miles from the west boundary has been classed as second-class land. West of that the land is poor, none of it being graded higher than third-class. The west tier of sections, south of the centre of section 30, is practically an unbroken alkaline swamp interspersed with small islands of scrubby spruce and tamarack. It is really a floating bog and could not be traversed. A large quantity of hay could be cut in this township and the water is good. In those portions which were graded as second-class there is a sufficient quantity of good land to raise an abundance of roots for ranching. Pine river enters on the southeast quarter of section 2, and leaves it on the north boundary of section 36. A couple of chains north of the south boundary the river abruptly ends and spreads out into a bog which includes the greater part of sections 1 and 2 and a part of section 36 in township 31. The river is entirely lost for about half a mile, and appears again as a tiny creek which expands in a short distance to its normal size. An Indian trail passes through this township crossing the north boundary in section 36 and the southern in section 4. It is a very good trail and makes the township easily accessible. Where the land is not meadow it is covered with small scrub with occasional small groves of poplar, spruce, tamarack and a few jackpine, but none of which is large enough to be of value except for firewood and fencing.—*J. Dickson, D.L.S., 1900.*

RANGE 22.

(*South outline.*)—The country along this line is an open, undulating, brushy **17.** country with occasional clumps of small poplar and willow. There are a number of scattered small ponds and hay marshes. The soil is a sandy loam of good quality.—*J. McLatchie, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

(*Subdivision.*)—This township is nearly all rolling prairie with first-class soil, except a few salt and alkaline patches in the southern half, where there are a few salty lakes; yet every quarter-section is about three-quarters good arable land.—*D. Sinclair, D.L.S., 1875.*

(*North outline.*)—This boundary is mostly timbered, principally with poplar and white birch. The surface is much cut up by numerous small lakes. The soil, in the timbered land, is all a rich, sandy loam of first-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is half prairie and half woodland. The soil is good everywhere. The timber is large, sound and clear and much of it is fit for saw-logs. There are a great number of small lakes, many of which are brackish, unpalatable to our taste, but relished very much by our cattle.—*D. Sinclair, D.L.S., 1875.*

This township can be reached by the Rossburn branch of the Canadian Northern railway, which passes through it. The soil of this township is good, consisting of a deep rich black loam, underlain by a clay subsoil and would be adapted to any kind of farming, though the chief crop is oats. The surface is rolling and wooded in the northern and eastern parts, but towards the southwestern part it becomes prairie. Good hay is harvested around the sloughs throughout the township. Surface water is plentiful, however, it is mostly salty. A fresh-water creek flows southerly through sections 31, 30, 19 and 18. The natural fall of the land being to the south, quite a number of the farms are to a certain extent flooded by the water which is run from farther north. The provincial government is, however, taking steps to relieve the flooded lands of this water. The fuel is mostly poplar wood, and can be secured from any of the sections in the northeastern part of the township. Poplar timber up to fourteen inches in diameter occurs in parts of this township as will be described hereafter. No water-power occur in this township. No stone-quarries and no indications of minerals were found. The climate is naturally inclined to be cold, to which cause the growing of oats only can be attributed. Wild ducks, muskrats and prairie-chickens are plentiful. Several moose were seen. Sections 1, 13, 16, 17, 18, 19, 20, 29 and 30 are more or less open and mostly cultivated. Small poplars and scrub occur in bluffs in some of these sections. Sections 14, 15, 21, 22 and the south halves of 31, 32 and 33 and the west half of 28 are mostly scrubby, though small portions of nearly all of them are cleared and cultivated. The remainder of the township is fairly well wooded with black and white poplar up to fourteen and sixteen inches in diameter. Some clearings have been made in most of these latter sections by the Galician settlers and are cultivated. A great number of lakes varying in size occur in the eastern two-thirds of the township. Some contain quite salty water, while in others it is more or less brackish. A number of trails exist in the northern part of the township, while in the western and southern parts the road allowances are mostly used. The Rossburn branch of the Canadian Northern railway passes through sections 1, 11, 10, 9, 8, 7, and 18.—*L. T. Bray, D.L.S., 1905.*

This township is very level prairie, only broken by a few marshy lakes and muskegs which contain good water. There is plenty of timber, chiefly poplar and balm of Gilead. The soil is rather inferior.—*A. C. Thomson, D.L.S., 1879.*

This township, situated in the Riding mountains of Manitoba, is about twelve miles northeast of the town of Shoal Lake, on the northwestern branch of the Canadian Pacific railway, from which town it is easily accessible by means of good wagon roads. The Canadian Northern railway is at the present time constructing a road

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

which will pass within about six miles of this township and will afford the easiest means of access. The soil is chiefly a rich black loam underlain by a clay subsoil and appears to be well suited for general farming purposes. The surface is of a rolling character rather than very hilly and is almost entirely covered by a heavy forest of poplar and birch timber. The township is almost entirely covered by a forest of large poplars and in some places groves of birch with a few spruce in some of the north-eastern sections. The township being so heavily timbered, contains comparatively little natural hay, although some large hay meadows were observed in sections 22 and 23. Other small hay marshes were noted in sections 1, 2, 3, 7, 15, 24, 32, 33, 34, 35 and 36. It is abundantly supplied with fresh water in the form of numerous large lakes, the chief of which covers large portions of sections 9, 10, 11, 22, 23, 29, 30, 31, 32 and 34. Many smaller lakes occur in other parts of the township. No water-power exists in this township. The survey was performed between the 14th day of February and the 8th day of March, and during most of this time cold zero weather was experienced. As to summer frosts I have no definite information other than that good crops were harvested in this locality during the previous summer from which it would appear that no serious summer frosts were experienced and that the climate is suitable for general farming. The heavy forest existing in this township affords an abundant supply of fuel. At present large quantities of cordwood are being cut and hauled to Shoal Lake and other convenient markets. No stone-quarries and no minerals of economic value are known to exist in this township. Several varieties of game are found, including moose, jumping deer, black bears, minks, ducks, prairie-chickens and ruffed grouse.—*J. W. Tyrrell, D.L.S., 1904.*

(*North outline.*)—This outline has a very uneven and knolly surface, with
20. numerous small lakes, ponds and marshes. Many of the lakes are very shallow and contain bad water. The timber consists of poplar, spruce, tamarack and white birch, much of which, however, has been killed by fire. The soil is of second-class quality.—*W. Ogilvie, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with belts of poplar. There are two or three creeks and lakes in this township, affording an abundance of water. The soil is light and sandy.—*A. C. Thomson, D.L.S., 1879.*

The surface of this township is broken by knolls and hollows and by the valley of Heron creek. There are a few small lakes and sloughs and some patches of open prairie in the southeastern part. The township is nearly wholly taken up by Galicians. About two-thirds of the forest which is poplar and spruce, suitable for building, has been fire-swept and has now a second-growth of willow and poplar scrub. The lakes, springs and creeks all contain fresh water, but no creek is suitable for the developing of water-power. There are no stone-quarries, minerals nor coal. Red deer are common and a few moose and elks were seen. This district is not subject to summer frosts.—*P. T. C. Dumais, D.L.S., 1907.*

(*East outline.*)—Along this boundary the country is generally covered with
23. poplar timber, most of which, however, has been killed by fire; in many places there is a dense undergrowth of hazel and rose bushes. The soil is a black loam of first-class quality.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The northern portion of this township is much broken by many streams of good water, some of which flow through deep narrow valleys. The soil throughout is a first-class sandy loam upon a subsoil of sand, and clay in places. The north tier of sections is practically open having only a growth of underbrush and dry

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

saplings. The country to the south is more wooded, and several quarter-sections have been settled upon. Prospects for the settling of the rest of it are good.—*A. F. Martin, D.L.S., 1897.*

(*North outline.*)—The country along this line is scrubby prairie, with a
24. first-class soil of loam, and in most cases a clay subsoil. The surface is slightly rolling, with long gentle slopes, affording good drainage. Dead fallen timber is frequently found, but live woods were not visible from the 7th base line.—*E. Bray, D.L.S., 1889.*

(*East outline.*)—This township is included in the Gilbert plains. The land is of excellent quality.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The surface of the township is rolling, and the soil is all of first-class quality. It is covered to a great extent with scrub, which may easily be removed with very little trouble. There are numerous bluffs of poplar, with a dense undergrowth of brush along the many creeks which traverse the township. Section 9 and the eastern half of section 8 are mostly hay lands; there are also a number of small patches of hay lands throughout.—*A. M. Bowman, D.L.S., 1890.*

(*South outline.*)—The southerly and southwesterly sections are in the
25. Gilbert plains, and consist of very scrubby prairie. The balance of the township is pretty well covered with woods of small poplar and scrub most of which have been killed by fire. The soil is nearly all of first-class quality, being a sandy loam with a clay subsoil. Valley river enters the township in section 7, and flows northeasterly, making its exit in section 25.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—The southern portion of the township is a scrubby prairie, with a rolling surface, numerous bluffs of poplar and occasional small hay meadows, ponds and sloughs. North of Valley river is an extended high plateau, and one is struck with the beauty of what seems a natural park. It is beautifully interspersed with the most attractive spruce groves. The depth of the valley of Valley river is about sixty feet. The stream itself is very winding, and in summer may be forded almost anywhere. There is a considerable amount of water, and a number of good mill sites. The soil is all of first-class quality, being a black loam with a sandy loam or clay subsoil.—*A. M. Bowman, D.L.S., 1890.*

(*Outlines.*)—This township is mostly all good land. Poplar and spruce bush
26. covers the northerly sections, while the remainder is mostly covered with small poplar and scrub, now nearly all dead. Drifting river flows easterly through the northeastern sections.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—The southwest portion of this township is a burnt, rolling country now becoming overgrown with scrub, while the north half, though also partly burnt, is still left with much green and dry poplar mixed with willow scrub in some sections. The soil is rated first-class, being generally a deep, rich, sandy loam with a sandy bottom, and is well watered by numerous small streams. This township is very well adapted to mixed farming.—*P. R. A. Belanger, D.L.S., 1895.*

(*East outline.*)—The country along this line is entirely covered with dry
27. timber intermixed with windfall and a second growth of poplar, averaging one and a half inches in diameter. The soil may be rated first- and second-class.—*P. R. A. Belanger, D.L.S., 1894.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

(*Subdivision.*)—This is a fractional township comprising four miles and a few chains between its north and south boundaries. It is entirely covered with green and dry timber intermixed with windfall and a thick second growth about twelve feet in height. The surface is rolling and broken by numerous tamarack swamps and a few marshes. It is well watered by numerous creeks, two lakes and Drifting river. The soil in the high land is generally good.—*P. R. A. Belanger, D.L.S., 1894.*

(*North outline.*)—This range is occupied by the foot of Duck mountain. It
28. is more or less timbered, and is interspersed with large spruce and tamarack swamps. Some good large elm, ash and birch timber is also found along a small river which runs across sections 35 and 34, but by the reason of forest fires a large percentage of the remaining bush is dead, but a second growth of timber is rapidly taking its place. The surface in this range is mostly level with a good deal of low land, the balance being gently rolling with an easy ascent to the west of about ninety feet in a mile. The soil is rated first-class on the high land, and when this country is opened up it will be found very suitable for all farming purposes.—*P. R. A. Belanger, D.L.S., 1894.*

(*East outline.*)—This outline is largely in bush country which has been a good deal opened up over sections 36, 25, and 24, but the south half is still thickly covered with a mixture of dry and green poplar, windfalls and high undergrowth. The soil is generally a good sandy loam with a clay subsoil, rated first- and second-class. The Mink river crosses the line in section 24, flowing in an easterly direction. This stream averages twenty-five links in width and one foot in depth and has a stony and gravelly bottom; the water is of excellent quality.—*P. R. A. Belanger, D.L.S., 1894.*

(*Subdivision.*)—The north boundary passes, for almost its whole distance, through heavy woods of balm of Gilead and poplar, with some spruce and elm at Fishing river. The whole township is covered with either timber or heavy scrub, except in the beaver meadows which are not numerous and on a few acres of prairie along the north boundary of section 19. There are some small clumps of spruce and occasionally a single tree but the prevailing timber is poplar and balm of Gilead, with a dense undergrowth of willow, hazel, and alder. The surface is slightly rolling or level. There are a few small areas of alkaline swamp the largest being on the east boundary of section 18; there are also a few gravel ridges. With these exceptions the land is all first-class, with a deep, rich black loam. In many of the sections there is not a yard of inferior land and, in the worst of them, seventy-five per cent is first-class. It is well watered. Fishing river flows through the south half of the township. The water in the streams is of the purest quality, and is clean and cool in the hottest weather. There are also a few smaller creeks and, where there are none, the indications are that good water can be obtained at any point by digging to a moderate depth.—*J. Dickson, D.L.S., 1897.*

The portion surveyed in this township comprises only the eastern tier of sections; it is covered with dry and green poplar, alternating with burnt openings, and is watered by swamps and by Mink river, which flows easterly across section 24. The soil and other features are about the same as in township 27.—*P. R. A. Belanger, D.L.S., 1894.*

(*East outline.*)—This township has been much opened by fires in sections 1,
29. 12, and part of 13, while in the north half of section 13, section 24, and the south half of section 25 the line runs through a low, marshy country draining into Shanty creek which crosses section 25 in a northeasterly direction. The

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

remainder of section 25 and section 36 is completely covered with poplar bush, interspersed with scattered spruce. A large spruce swamp occupies the greater part of section 1, and a branch of Fishing river fifteen links wide and eighteen inches deep, having good water, flows in an easterly direction in the north part of section 1. The Fork river, a stream of good water is intersected in the south half of section 36, flowing in an easterly direction. This stream is about fifty links wide and one foot deep, with a gravelly and stony bottom. The soil is rated first- and second-class.—*P. R. A. Belanger, D.L.S., 1894.*

(*Subdivision.*)—The soil is generally of fair quality. The country surveyed is timbered with poplar and a few spruce bluffs, mostly burnt, except in the northwest corner of the township, where there are a few bluffs of green spruce.—*A. F. Martin, D.L.S., 1898.*

The south boundary is nearly all wooded with heavy timber which extends northward from one to three miles to where there are large areas of high scrub poplar and balm of Gilead, with an undergrowth of hazel, willow and alder. There is a considerable quantity of spruce and tamarack, mostly in sections 3, 10, 13, and 14, but it is not large enough to be of any value. The part subdivided is nearly all good land with a rich, black clay loam. Almost every quarter-section will make a good farm. There are several beaver meadows which will yield large quantities of good hay when the clumps of willow and alder are cut. None of the unsurveyed half of this township is suitable for agriculture, except a strip extending about thirty chains north and south of the Indian trail. The south part is watered by Fishing river; the north is watered by Fork river, of which there are here two branches, both containing good water. In some of the sloughs there is water of good quality. The surface is all either level or slightly undulating.—*J. Dickson, D.L.S., 1897.*

(*East outline.*)—The land along this line is very low and wet; dry land can
30. be found only in the south half of section 1, and in a strip about fifty chains long in sections 25 and 36, besides the ten chains of gravel ridge, over which the Canadian Northern railway runs across section 13. The north branch of Fork river runs from the west across the centre of the township till it meets the gravel ridge, above described, where it turns southeasterly into a reed muskeg, which extends over section 12 and parts of sections 1 and 13, and over which it spreads and flows southeasterly for about a mile and a half past the line, where it forms again into one stream before joining the south branch. The general character of the country in this township cannot be judged by the above description, as in the interior a large tract of good land is found on the west side of the colonization road which runs parallel to the railway. This township may also be called the "fruit garden" of the west, as all kinds of berries are to be found here, and even plums are found along the Fork river.—*P. R. A. Belanger, D.L.S., 1898.*

(*Subdivision.*)—The surface is rolling and the soil is fair. The timber consists of poplar, brulé, and a few bluffs of green spruce of good size, principally along the banks of Pine river which follows the correction line in sections 31, 32, and 33. All the valuable timber is being taken out for ties and logs. The Canadian Northern railway crosses the township in sections 24, 25, and 35, following the edge of a large muskeg. A trail, leading from Dauphin to the Swan River district, runs from section 1 to section 34, following a well-defined ridge.—*A. F. Martin, D.L.S., 1898.*

At the time of the survey there were a number of settlers in a portion of the township which had previously been surveyed. In the southwest quarter of section 28 one man had his house and his winter's supply of hay secured. The Swan River

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

trail traverses the eastern portion of the township, and the railway touches section 36. The portion subdivided is all first-class land except the south two miles. The district is well watered by creeks of clear, cool water flowing from the Duck mountains. Fork river waters it on the south side, and the north boundary is watered by the south branch of Pine river. The township was formerly well timbered, but the timber was nearly all killed by fire. Poplar, balm of Gilead, spruce, and tamarack prevailed, but the timber is now of little, if any, commercial value.—*J. Dickson, D.L.S., 1899.*

(*East outline.*)—Section 1 and the greater part of section 36 are covered by **31.** tamarack muskegs, but the remainder of the line runs over a rolling country, partly covered with dry and green spruce, jackpine, and scattered poplar. The land is generally poor and is rated third-class, with the exception of section 12, which ranks first-class. Pine river crosses section 12 and runs in an easterly direction for about three miles across range 21, after which it takes a bend to the north.—*P. R. A. Belanger, D.L.S., 1898.*

(*Subdivision.*)—Fully fifty per cent of the land in this township is first-class; about twenty-five per cent is second- and the remainder is third- and fourth-class. The different varieties of land do not lie in isolated blocks, but are pretty well intermingled, so that a settler can have a quarter-section of good arable land and another adjacent thereto suitable for pasture. Large quantities of good hay grow in many parts. Pine river is a beautiful stream of crystal-clear water which has its source in the Duck mountains. It flows easterly through the township, dividing it very nearly into equal parts. Another stream of about the same size and quality enters the township from the south in section 5 and, flowing along the south boundary, connects with Pine river in section 12. There are also numerous smaller streams, containing good clear water, flowing easterly from the Duck mountains. The township is well watered and, if the old obstructions were cleaned out of the streams, it would also be well drained. There are two remarkable gravel ridges, only a few rods wide and over five feet high, extending across the township at an average distance of a mile apart. The most easterly ridge enters a few chains west of the southeast corner of the township, and leaves near the centre of the east half of section 34. The Canadian Northern railway is constructed along this ridge. The south boundary crosses the second ridge in the southeast corner of section 2, and the north boundary crosses it near the west side of section 34. The trail between Dauphin and Swan River is on the crest of this ridge. Garland station, where there is a saw-mill, is in section 12. This point will, it is safe to predict, be a place of some importance in the near future, as it is located beside Pine river, a stream of good water; is easily accessible by the leading roads and is the centre of a good agricultural district. The township was formerly heavily timbered with spruce, tamarack, and poplar, but fires a number of years ago destroyed most of it, and it is now down and being rapidly replaced by a heavy second growth. All the valuable timber still remaining will be taken out during the present winter. One good fire, in a dry season, would leave nearly the whole of the township ready for the plough. One settler located and built a house in the southeast quarter of section 2 while the survey was in progress.—*J. Dickson, D.L.S., 1899.*

(*North outline.*)—Throughout this range the land is generally low, though **32.** partly dry. Section 36 is a tamarack and spruce swamp. The remainder is partly covered with large willow and spruce bluffs, and partly with poplar and spruce bush. A creek with a fine belt of hay was crossed in the east half of section 33. The Canadian Northern railway and the colonization road from Dauphin to Swan River were both intersected in section 32. The former was built only this sum-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 22—*Continued.*

mer, but the latter was opened in the fall of 1897. The railway runs near the foot of Duck mountain along a narrow gravel ridge which extends north and south for many miles, and the formation is attributed by geologists to the action of the waves of old lake Agassiz. The colonization road also follows for a long distance a similar ridge lying about half a mile west of the first one. This latter ridge forms practically the foot-hill of Duck mountain, and rises to a great height at its north end.—*P. R. A. Belanger, D.L.S., 1898.*

(*East outline.*)—With the exception of a few chains of dry land near the 9th base line, this township is an immense floating bog, over which all the creeks and rivers, crossed on the west boundary, form one vast extent of running water, covering the whole length of the line. This muskeg is also covered with scrubby tamarack and spruce bluffs, with much willow and alder. This land can hardly be drained, and consequently is unfit for anything.—*P. R. A. Belanger, D.L.S., 1898.*

(*Subdivision.*)—Only the west half of this township was subdivided, as the east half is too low and wet for either farming or ranching. Nearly fifty per cent of the west half is first-class land, and the remainder is second-class. The gravel ridges from township 31, range 22, pass through this township. The railroad enters the west half near the southwest corner of section 15, and leaves near the northwest corner of section 32. The township is well watered by numerous streams of good water flowing from the Duck mountains. An abundance of good hay can be obtained along the east half of the surveyed portion. The township was formerly heavily timbered, but is now mostly burnt over and the timber is down. What timber escaped the fire is now nearly all removed. A large quantity of railroad ties was taken out last winter. A dense second growth is now growing up. No settlers were found in the township.—*J. Dickson, D.L.S., 1899.*

The east boundary of sections 34, 27, and 22 runs over a level country covered with willow, alder, spruce, and poplar from six to twelve inches in diameter, with heavy windfall and dry fallen timber. The east boundary of sections 35 and 36 crosses a hay marsh about one mile wide. The surrounding country is level and swampy. The remainder of section 26 is drier and covered with black spruce and a few birch trees. In section 23 the line runs over a hay swamp, with scrub, for half a mile, and then crosses a floating bog, a quarter of a mile wide. The surrounding country is covered with black spruce, birch, and tamarack from six to twelve inches in diameter. In section 22 the line crosses Pine river, and for a quarter of a mile to the south the country is swampy. It then becomes dry, scrubby burnt prairie. The remainder of the township is low land and consists mainly of spruce and tamarack muskeg, through which Pine river flows. It is apparently of no value except for lumbering purposes.—*J. C. DesMeules, D.L.S., 1900.*

(*Partial.*)—Part of the township consists of sloughs, muskegs and flat land covered with a dense growth of willows. The muskegs are timbered with stunted tamarack fit only for firewood and fence posts. The soil is black muck with a sub-soil of sand. There is a strip of good land about forty chains in width along the railway and along the south boundary of the township. There is also a strip of dry land timbered with small spruce, jackpine, tamarack, and poplar and balm of Gilead.—*J. McAree, D.T.S., 1903.*

RANGE 23.

(*East and south outlines.*)—The country along these lines is an undulating
17. prairie with many clumps of poplar and brush. There is a great number of small shallow ponds scattered throughout. The soil is sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

(*Subdivision.*)—This township is rolling prairie, with hay marshes and bluffs of poplar and willow. Two branches of Oak river run into Shoal lake, of which a part lies in this township. The soil is fertile, and in every respect the land is attractive for settlement.—*J. Doupe, D.L.S., 1879.*

(*North and east outlines.*)—These outlines traverse an undulating brushy
18. prairie, with a number of poplar bluffs. There are a great number of small ponds throughout. Oak river flows southerly through section 36; it is ten links wide and contains good water. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie with hay marshes and poplar bluffs. Two branches of Oak river and a creek run through the eastern portion of this township. The soil is good, and some of the land was settled prior to the survey.—*J. Doupe, D.L.S., 1879.*

(*East outline.*)—This boundary has an uneven surface, with many small
19. lakes, ponds, meadows and muskegs. The timber, which consists principally of poplar and white birch, has nearly all been killed by fire. There is a fine creek, nine links wide, two and a half feet deep, with good water running westerly through section 13. The soil is good gravelly clay of second- and third-class quality.—*W. Ogilvie, D.L.S., 1875.*

(*South outline.*)—Along this outline the country is a rolling prairie, with scattered willows and small ponds. In section 5 there is some poplar and birch, with hazel and cherry brush. The soil is of first- and second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is a level prairie, with numerous lakes, ponds and marshes, with very little timber. The soil is a deep rich clay loam, free from boulders. There is an abundance of good water and hay.—*J. A. Snow, D.L.S., 1880.*

This township is situated in the Riding mountains of Manitoba, and is about twelve miles due north of the town of Shoal Lake on the northwestern branch of the Canadian Pacific railway from which place it is accessible by good wagon roads. The Canadian Northern railway is at present undergoing construction through the southwest corner of this township and will afford the easiest route of approach. The soil is chiefly black loam from two to sixteen inches in depth with a clay subsoil and appears to be well suited for the raising of general farm produce. The surface of this township is of a rolling rather than a hilly character and for the most part is covered with a heavy growth of poplar and willow scrub. Some prairie is found in sections 2, 3, 4, 6 and 7, while in some of the northerly sections there is some poplar and birch timber affording a sufficient supply of fuel for present local use. Very little timber of any consequence remains, the original forest having been almost entirely destroyed by fires. Natural hay appears to be somewhat less abundant in this township than in some of the others in the vicinity, but natural hay marshes were noted in sections 1, 2, 4, 5, 13, 14, 15, 28, 29, 33 and 36. Several large sized lakes occur, the largest being in sections 21, 22, 23, 24, 25, 26 and 28. No water-power of any consequence is known to occur in this township. The township was surveyed during the months of January and February, during which time the thermometer on one or two occasions registered as low as forty degrees below zero. The average temperature was about fifteen degrees below zero. From the fact that good crops were harvested in this locality during the previous summer it would appear that no serious summer frosts were experienced and that the climate is suitable for the raising of

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

general farm produce. The limited quantity of poplar and birch timber remaining in this township forms the local fuel supply, almost the whole of the forest having been destroyed by fire. No stone-quarries and no minerals of economic value are known to occur in this township. Several varieties of game are found, including moose, jumping deer, black bears, minks, ducks, prairie-chickens and ruffed grouse.—*J. W. Tyrrell, D.L.S., 1904.*

(*North outline.*)—The north boundary passes alternately through dense
20. poplar and birch woods with thick hazel and cherry brush, tamarack and spruce swamps with patches of open marsh, and across numbers of small lakes and marshes. The timber, with the exception of a few scattered trees, is not fit for anything but rails and firewood. The surface of the country is rolling and the soil is of second-class quality. The water in the swamps and lakes is generally stagnant and sometimes brackish.—*G. M. Kingston, D.L.S., 1875.*

(*East outline.*)—The eastern boundary has a very uneven and knolly surface with numerous small lakes, ponds and marshes. Many of the lakes are very shallow and contain bad water. The timber has been nearly all killed by fire. The soil is of second-class quality.—*W. Ogilvie, D.L.S., 1875.*

(*Subdivision.*)—This township forms the summit of the Riding mountains. There are several small lakes and marshes, although the township is generally well drained. The timber is large enough for building purposes. The soil is very rich and deep.—*J. A. Snow, D.L.S., 1881.*

This township is situated in the Riding mountains of Manitoba, and is about twenty miles due north of Shoal Lake station, on the northwestern branch of the Canadian Pacific railway, but only about six miles north of the newly constructed Canadian Northern railway, from both of which railways it is easily accessible by good wagon roads. It is about equally distant from the post offices of Oakburn and Rosburn at which latter place there are several general stores, a blacksmith's shop, etc. The soil is chiefly a rich black loam underlain by a clay subsoil and appears to be well suited for general farming purposes. The surface of this township is considerably broken and hilly and almost entirely covered with timber and heavy scrub, the latter greatly predominating. Poplar, birch and spruce timber, varying from six inches to eighteen inches in diameter is found in some sections, notably the following: 12, 13, 23, 24, 25, 27, 31, 32, 33, 35 and 36. The remainder of the township is covered by a heavy growth of poplar, willow and hazel scrub. This township possesses a very considerable amount of natural hay in the numerous marshes which may be found chiefly in the following sections: 1, 3, 6, 7, 8, 9, 10, 11, 13, 14, 16, 17 and 30. It contains no lakes of large size but numerous small lakes and sloughs are scattered over its surface from which one of the sources of the Minnedosa river is obtained. This stream, the head waters of which lie in sections 28 and 34, flows through sections 27, 26, 23, 14, 11 and 12, and contains fresh water of good quality. There is no water-power of any consequence, the dimensions of the stream being only from six to twelve feet in width and from six inches to two feet in depth. This township was surveyed between the 1st of December and the 9th of January, during which time the weather was, of course, cold and wintry. As to summer frosts I have no definite information, but from the fact that good crops were harvested in this locality during the previous summer would infer that no serious summer frosts were experienced and that the climate is suitable for general farming purposes. The poplar forests occurring in this township furnish an abundant supply of fuel for local use, provided it is protected from the ravages of forest fires which have already destroyed

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

so much of the timber of this district. No stone-quarries and no minerals of economic value are known to occur in this township. Several varieties of game are found, consisting of moose, jumping deer, black bears, minks, ducks, prairie-chickens and ruffed grouse.—*J. W. Tyrrell, D.L.S., 1904.*

(*East outline.*)—The surface along this line is very uneven, and heavily
21. timbered with large spruce and poplar. There are many small lakes, ponds and marshes; on the latter there is generally a growth of small tamarack. The soil is of third-class quality.—*W. Ogilvie, D.L.S., 1875.*

(*North outline.*)—The northern boundary has a rolling surface and is tim-
22. bered with spruce, poplar and willow brush. The land generally is of third-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*East outline.*)—The eastern boundary is nearly all open, with bluffs of green poplar interspersed with open marshes and hay meadows. Some of the marshes are covered with moss and a growth of spruce and tamarack. Sections 25 and 36 have a first-class black clay loam soil. The other four sections have a second-class soil.—*W. Ogilvie, D.L.S., 1875.*

(*North outline.*)—The northern boundary is heavily timbered with poplar,
23. a great deal of which is dead. There are occasional patches of scrubby prairie and several dry watercourses which run in a northerly direction across this boundary. The soil is of second-class quality.—*E. Bray, D.L.S., 1890.*

(*East outline.*)—The line along the eastern boundary of this township, for the first mile from the north, passes through thick poplar timber with dense underbrush. Farther south the timber is burnt in places, and open spaces covered with scrub are met with. At the northeast corner of section 12 the line crosses a fine stream of spring water, flowing southeast and forming a branch of Wilson river. The soil is of first-class quality throughout the township.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—Most of this township is gently rolling land. It is situated on the northwestern slope of Riding mountain and is well watered by numerous streams and springs. The soil throughout is a rich clay loam of first-class quality. Sections 5 and 6 being rough, hilly, and much broken by small marshes, have been rated as second-class. Most of the timber has been destroyed by fire. The vegetation is very luxuriant, as indicated by the excellent grass in the lower tracts and the profuse growth of pea-vines in the woods.—*J. Doupe, D.L.S., 1890.*

(*North outline.*)—The country along this line is scrubby prairie with a first-
24. class soil of loam, and in most cases, a clay subsoil. The surface is slightly rolling, generally with long gentle slopes, giving good drainage. Dead fallen timber is frequently found, but live woods were not visible from the 7th base line.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—The land is slightly undulating, with a gradual rising to the southwest, affording ample facilities for drainage if required. About two-thirds of the township is covered with a thick growth of small poplar and willows, and a few small scattered bluffs of poplar running up to a foot in diameter, but nearly all the valuable timber has been killed by fire; the remaining third of the township is scrubby prairie. It is fairly well watered by four or five branches of Wilson river. This township is well adapted to settlement, and the vegetation appears to be considerably earlier than in the country around the county of Shoal Lake.—*J. Doupe, D.L.S., 1890.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

(*South outline.*)—This township appears to be excellent land, and lies mostly
25. in Gilbert plains. Scrub is very plentiful, and some timber was found. Valley river runs in an easterly direction through the township, along which some light sandy land was noticed.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—The surface is slightly undulating and the soil mostly clay loam with a clay subsoil. It is generally a scrubby prairie with scattered clumps of timber, particularly along Valley river. With the exception of a few strips along Valley river, there is no true prairie land in the township. For grain-growing or cattle-raising this township is admirably adapted. In no section is the soil anything but first-class, and the numerous hay marshes would furnish an abundance of feed for cattle. Valley river flows in an easterly direction through the township. It is about one chain wide, with an average depth of two and a half feet of water.—*J. Vicars, D.L.S., 1890.*

(*North outline.*)—Along this line the country is thickly timbered with poplar
26. and patches of willow and dense scrub. The poplar is nearly all dead, excepting that in sections 35 and 36. Sections 31, 32 and 33 are rough and hilly.—*E. Bray, D.L.S., 1889.*

(*Subdivision.*)—This township is well adapted to settlement, there being an abundance of wood and water. The soil is first-class, and the numerous hay marshes will give an abundance of feed for cattle. Like all the locality, it was at one time covered with a heavy growth of timber, which has been mostly burnt. There are a number of small brooks, and water may be had anywhere by digging a short distance. In the northern portion of the township there is some good timber, consisting of poplar, spruce, and a few tamarack.—*J. Vicars, D.L.S., 1890.*

Only the four eastern rows of sections were surveyed. The southern two miles of this township are burnt country, which may be considered as prairie, though at one time it was solid bush to judge by the stumps and roots left here and there. The remainder of the township has also been opened by fire, but there is much bush left in sections 21, 22, 27, 28, 33, and 34, while the eastern sections are burnt and mostly covered with green and dry willow and poplar scrub, with scattered bluffs of poplar. The soil is rated first-class; it is of the very best quality and well adapted to mixed farming.—*P. R. A. Belanger, D.L.S., 1895.*

(*North outline.*)—This line was run through a rolling and hilly country,
27. sloping slightly to the southeast, and crosses several streams flowing into Drifting river. The land is first-class and covered with a dense growth of young poplar, willow, and scrub, the original forest having been destroyed by fire some years ago, except in a few hollows where scattered bluffs of poplar and spruce are still to be seen.—*J. U. DesMeules, D.L.S., 1900.*

(*East outline.*)—This line runs through a perfectly level and partly gently rolling country covered with dry and green poplar timber; where the timber is dry it is generally intermixed with second growth, from twelve to fifteen feet high, with wind-falls. Drifting river, is crossed in section 24, and another beautiful stream is met with in section 25. Both streams run easterly for about three miles, when they turn southeasterly and the latter joins the former.—*P. R. A. Belanger, D.L.S., 1894.*

(*Subdivision.*)—The line along the south of fractional sections 7, 8, 9, 10, 11, and 12 was run over an undulating country overlooking the Gilbert plains towards the south. A branch of Valley river was crossed in section 8, and a lake of good clear

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

water in section 9. The land is first-class for farming purposes and covered with a new growth of young poplar, alder, willow, and scrub. The original forest was destroyed by fires some years, but several scattered bluffs of poplar are still to be found. A lime-kiln has been built at the north end of section 32, township 26, range 23; the limestone is obtained from a ridge overlooking a hollow in which the branch of Valley river, already alluded to, rises. A good trail leads from this place northward to Ethelbert on the Canadian Northern railway, and southward to Umatilla, Oaknook, Valley River, and the settlements of the Gilbert plains. Along the east boundary of sections 31, 30, 19, and 18 the country is undulating and covered with fallen timber, poplar, willow, and brush, together with some scattered bluffs of poplar six to ten inches in diameter. The country along the east outline of sections 32, 29, 20, and 17 is also undulating and covered with a heavy growth of poplar and spruce, six to ten inches in diameter, and a thick underbrush of willow, alder, and scrub, intermixed with a heavy layer of fallen timber. A branch of Drifting river is crossed in sections 32 and 20. The line along the east boundary of sections 33, 28, 21, and 16 crosses another branch of Drifting river twice in section 33, and the first branch, above-mentioned as crossing section 32, crosses here in section 21. The country is undulating. Sections 33 and 28 are covered for the most part with spruce and tamarack six to ten inches in diameter, and underbrush of willow, alder, and scrub, with fallen timber intermixed. Along the east boundary of sections 34, 27, 22, and 15 the country is undulating and covered with a heavy growth of poplar six to ten inches in diameter and a thick underbrush of willows and alders. Sections 36, 24, 14, and 22 are settled upon by homesteaders. Although these people settled here only a few months ago, they have raised a sufficient quantity of potatoes, turnips, cabbages and other vegetables for their use during the coming winter. This township is a fine piece of country, and very suitable for farming purposes, as well as for stock-raising and lumbering. At least seventy-five per cent of it ranks first-class; it is well timbered, and abundantly furnished with water throughout the whole year by means of wells easily built, or by the numerous ponds and creeks emptying towards the south into Valley river and towards the east into Drifting river.—*J. C. DesMeules, D.L.S., 1900.*

(*North outline.*)—The ascent of Duck mountain in this range is gradual until

28. the middle of section 35 is reached, when it becomes rough, hilly, and knolly, and continues so across the whole of section 34. All this part is heavily timbered with large balm of Gilead, spruce, poplar, and birch often measuring from ten to thirty inches in diameter. This large timber is found principally in sections 36 and 35, and in sufficient quantities for lumbering operations. A creek flows in from the north through a tamarack swamp in the east half of section 36, and another creek flowing in a southeasterly direction enters the northwest corner of section 35 and empties its waters into the first-mentioned one. The water in both creeks is fresh and good.—*P. R. A. Belanger, D.L.S., 1894.*

Only the north boundaries of sections 32, 33 and 31 were surveyed. This line runs over an undulating country covered with a heavy growth of poplar, spruce and birch for the most part. Over sections 32 and 31 the country is more broken and hilly, and where the original forest has been destroyed by fire there is now a thick growth of young poplar, willow and alder intermixed with fallen timber.—*J. C. DesMeules, D.L.S., 1900.*

(*East outline.*)—The country along this line is entirely timbered, but a great percentage of the timber has been killed by fires, and is now intermingled with wind-falls and a second growth of poplar about twelve feet high. Creeks of all sizes, from

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

three to twenty links wide, supply good water in every section along this line. They all flow in an easterly or southerly direction. The soil ranks first- and second-class.—*P. R. A. Belanger, D.L.S., 1894.*

(*Subdivision.*)—The route followed was almost due north from Grand View for about twelve miles thence north and a little east going partly across country and partly following the road allowance, until we reached the south side of the township; thence by trail into it. The road was fairly good, with the exception of an occasional bad mud-hole, for the first twelve miles, then it became very bad in many places. Long stretches of it are nothing but mud and water two feet deep or more, with some muskeg and a few bad creeks to cross. The trail through the township was very wet, and through a good deal of muskeg. In fact in quite a number of places we had to pack our baggage and supplies across, as the horses could scarcely get through the mud. The soil is of quite different varieties. To the south there is a great deal of muskeg and some sand, and also a few small parts of good loam. Towards the north the ground is high, and good creeks drain it. The soil there is of good quality for farming. The surface towards the south is gently rolling or flat, but at the north it is quite hilly. There is very little prairie, or in fact really none, as the open part is merely burnt off. At the south there is considerable scrub and scattered patches of spruce, tamarack and jackpine timber, but none of any great extent. Towards the north it is all heavily timbered, but will not be of use for a timber limit. There is some timber of fair size, from ten to eighteen inches in diameter. It consists of spruce, tamarack, poplar and a little jackpine. Hay is very scarce and of rank slough quality. There is a little in section 10, but that is the only place noticed. Water is very abundant, and is found nearly all over the township, in fact much of the south and east parts were actually flooded. In the northerly portion the water is found in good clear creeks with swift currents. The water is all good and fresh, and the supply is more than sufficient and permanent. Small water-powers might be developed from these streams, but would be of no great value. The climate in May was usually warm, but frequent cold, windy rainstorms were experienced. No summer frosts were noticed. Fuel is very plentiful. Wood is the only kind of fuel used; it can be had almost anywhere, but is most plentiful towards the north and west where there is considerable windfall. No stone-quarries nor minerals were found, and no game was seen except rabbits, although deer tracks were noticed. It was possibly a very wet season, otherwise the south part of this township would show up to better advantage for farm land, while the north will take a great deal of work to clear it.—*W. G. McFarlane, D.L.S., 1906.*

Sections 1, 12, 13, 24, 25 and 36 are east of the Duck Mountain forest
29. reserve. The surface is gently rolling, covered with a thick growth of poplar, and poplar and willow scrub. Section 1 is heavily covered with spruce, averaging ten inches in diameter. The soil is clay with stones and gravel. The water both in sloughs and streams is good. Hay is very scarce and hard to get. Building timber is plentiful and there is wood for fuel in abundance. These sections are nearly all taken up and in some of the sections the settlers have made substantial improvements.—*W. J. Deans, D.L.S., 1908.*

(*East outline.*)—The east boundary of this township runs over a rolling
30. country forming part of Duck mountain. Section 1, the south half of section 12, and the whole of sections 25 and 36 have been cleared by fire. The remainder is heavily timbered with large poplar, birch, spruce, and thick hazel and willow bush. Numerous streams run across the line in a northeasterly direction, the most

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Continued.*

important being Fork river in section 1 and Pine river in section 36, on which timber can be floated down to the railway track. The soil ranks second- and third-class.—*P. R. A. Belanger, D.L.S., 1898.*

(*Subdivision.*)—Sections 1, 12, 13, 24, 25 and 36 are east of the Duck Mountain forest reserve. The sections are rolling and broken up by valleys of streams in sections 1, 12, 24, 25 and 36. All of these sections are covered with thick poplar and willow scrub. In section 13 there is some spruce, averaging ten inches in diameter. There is sufficient timber for the requirements of the settlers and an abundance of fallen timber for fuel. The soil is clay with sand and gravel. The water in the streams is good. Hay is very scarce. Most of the sections are settled and the occupants have made great strides for the short time they have been on the land.—*W. J. Deans, D.L.S., 1908.* —

(*East outline.*)—Along this line the country is all burnt with the exception
31. of section 36, which is heavily timbered with spruce and poplar. It is also a rolling country forming part of Duck mountain. Small tributaries of Pine river are found in every section. The land is rated second-class.—*P. R. A. Belanger, D.L.S., 1898.*

(*East outline.*)—The country crossed by this line is all heavily timbered with
32. spruce, tamarack, and poplar, partly good for lumbering purposes. It is watered by numerous creeks, the largest being in section 13. The land is gently rolling, and forms part of the foot-hills of Duck mountain. The soil ranks first- and second-class.—*P. R. A. Belanger, D.L.S., 1898.*

(*Subdivision.*)—The route followed from township 28, range 23, was by trail northeasterly to Ethelbert, thence northerly on the west side of the railway to Pine River station, thence westerly and a little south by trail into the township. The trail to Ethelbert was very bad, as a great deal of muskeg and many mud-holes were encountered. From Ethelbert to Pine River the trail runs along a gravel ridge, and was good. From there to the township it was very soft and bad. The trail into the western part of the township passes over some high hills, and is quite steep in places. The soil is of all varieties. Towards the southeast corner of the township it is swampy with a little loam and a heavy clay subsoil. In some places there is deep muskeg. To the northeast it is usually very sandy. There is some very fair farm land along the foot of the hills and also some towards the southwest corner of the township. The northern part, near Pine river, is usually too rough to be cultivated, and considerable stone and gravel is found there. The surface is all covered with scrub or timber with the exception of one or two places near the foot of the hills. Most of the valuable timber has been taken from the south and southeast parts of the township, but there are a few clumps of fair spruce and tamarack scattered throughout, leaving good timber for settlers. There is also some jackpine of fair size in the northeast quarter. Small jackpine, about three inches in diameter, is found in large dense groves on the hills in sections 19, 20 and 21. Here the windfall is often piled fifteen feet high. The high land is generally covered with jackpine, willow, and poplar scrub, and is badly cut up by deep ravines through which the creeks flow. Hay sloughs are scarce, but a little hay of good quality may be found along the foot of the hills. Water is plentiful and always good and fresh. Pine river runs nearly across the northern part of the township. It would average about two feet deep and from sixty to seventy feet wide when normal with a current of five or six miles per hour, but after a heavy rain it rises very rapidly to a depth of six or seven feet or more, and the current becomes much swifter. At times it can be easily forded at the rapids,

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 23—*Concluded.*

but within an hour after a heavy rainstorm it becomes an impassable, roaring current. There are no waterfalls, but power could be developed at some of the rapids on Pine river, where high steep banks often occur. The east and southeast parts of the township are liable to be flooded to a depth of six inches. The rainfall was plentiful, and no summer frosts were noticed. Wood for fuel is plentiful throughout the township. No coal, stone-quarries nor minerals were found. Bears, moose, jumping deer, and rabbits were seen, and a couple of beaver dams were noticed.—*W. G. McFarlane, D.L.S., 1906.*

RANGE 24.

(*South outline.*)—This line traverses an undulating prairie on which are
17. occasional clumps of poplar and willow. The soil is a sandy loam of second-class quality, covered in a few places by small hay swamps.—*J. McLatchie, D.L.S., 1893.*

(*Subdivision.*)—This township is a rolling prairie with numerous hay marshes and clumps of poplar and willow. The soil is a good clay loam. A creek runs through the township. Much of this land was settled prior to the survey.—*J. Doupe and T. Drummond, D.L.S., 1879.*

(*North outline.*)—The land along this line is an undulating prairie with
18. occasional clumps of brush and poplar. There are a number of small patches of hay swamp. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is an undulating prairie interspersed with hay marshes and bluffs of poplar and willow. The soil is a good clay loam. The trail from Fort Pelly to Shoal Lake passes through the township.—*J. Doupe and T. Drummond, D.L.S., 1879.*

(*South outline.*)—The country along this line is a rolling prairie, with small
19. scattered hay swamps and clumps of poplar and willows. The soil is of first class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—Immediately south of Riding mountain this township is drained by Arrow river. The soil is excellent; a good deal of the land was settled prior to the survey.—*J. A. Snow, D.L.S., 1880.*

(*North outline.*)—The northern boundary passes alternately through dense
20. poplar and birch woods with thick cherry and hazel underbrush. There is some prairie land in section 31, and throughout the township are a few tamarack and spruce swamps, and patches of swamp and open water. The timber is not fit, with the exception of a few scattered trees, for anything except rails and firewood. The soil is of second-class quality.—*G. M. Kingston, D.L.S., 1880.*

(*Subdivision.*)—This township lies on the southeastern slope of Riding mountain and is almost entirely wooded. The soil is excellent.—*J. A. Snow, D.L.S., 1880.*

This township is situated on what is commonly known as Riding mountain and is located about fourteen miles north of Kelloe station on the northwestern branch of the Canadian Pacific railway. It may be easily reached by good wagon roads either from Shoal Lake, Solsgirth or Kelloe. The village of Rossburn is situated immedi-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 24.—*Continued.*

ately adjacent to the southwest corner of the township and therefore affords the most convenient post office and local supply station. The Canadian Northern railway is at present being constructed through it. The soil of this township is chiefly a black loam from six inches to twelve inches in depth with a clay subsoil and is apparently well suited for general farming purposes. The raising of cereals has not yet been undertaken to any extent, but the Galicain settlers raise all kinds of garden produce very successfully. Almost the whole of this township is situated on what is known as Riding mountain, and is of a rolling and hilly character and much broken by numerous large and small lakes. The township is almost entirely covered by poplar woods and in many places a heavy growth of hazel and willow scrub. Small tracts of prairie land were noted in sections 6, 10, 11 and 25. As above intimated this township is well covered with poplar timber varying in size from three inches or four inches up to one and one half feet in diameter and such may be found in almost every section of the township. No spruce or other variety of timber suitable for manufacturing into lumber occurs. Numerous small hay meadows are scattered everywhere throughout this township affording an abundant natural supply of this useful commodity. This township is exceptionally well watered by the numerous lakes which are scattered over its surface and at least one creek which forms the outlet of the largest of the lakes (Grundy lake) and flows in a southwesterly direction through sections 8, 5 and 6. Gundy lake covers a large part of sections 9 and 10 as well as parts of 15 and 16, whilst Fishing (local name) lake, which is the second largest body of water in the township, covers a large portion of sections 23 24 and 26. Other smaller lakes occur in section 2, 3, 4, 5, 15, 16, 17, 21, 22, 24 and 28, and the water of all the above lakes is quite fresh and some of them, particularly that known locally as Fishing lake, are said to contain an abundance of fish. No water-powers occur in this township. As this township was surveyed between September 24 and October 21, the climate was cool and autumn-like and one or two flurries of snow were experienced and frosts usually occurred during the nights. As to summer frosts, I have no definite information except that it was observed that very fine crops of wheat and oats were grown and harvested in section 6 of township 21, range 24, which immediately adjoined this township. The poplar forests occurring in the township will furnish an abundant supply of fuel for many years to come, provided it is protected from the ravages of forest fires, which too frequently sweep over this western country. No stone-quarries nor minerals of economic value are known to occur in this township. Several varieties of game are found, moose, jumping deer, black bears, minks, ducks, prairie-chickens and ruffed grouse.—*J. W. Tyrrell, D.L.S., 1904.*

(*North outline.*)—Birdtail creek runs southwesterly across the township.

21. There is some very good prairie land in the valley. Good spruce, fit for building or for sawlogs is found in the northeastern portion of the township. The creek is wide, and deep enough to float sawlogs.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—The township is situated on Riding mountain, and watered by Birdtail creek. On either side of the creek a dense willow swamp extends. The general character of the township is hilly and wooded. The timber is large enough for building purposes. The soil throughout is very rich and deep.—*J. A. Snow, D.L.S., 1881.*

This township is situated about twenty miles due north of Kelloe, on the north-western branch of the Canadian Pacific railway, and may be easily reached from either Shoal Lake, Solsgirth or Kelloe, by good wagon roads; that from Solsgirth per-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 24.—*Continued.*

haps affording the shortest and best connection with the railway. Ranchvale post office is situated within a mile of the southwest angle of this township and is only about six miles north of the village of Rossburn, where there is not only a post-office and telephone station, but several general stores. The Canadian Northern railway is at the present time being constructed through this village. The main Dauphin trail following up the valley of Birdtail creek, passes diagonally through this township from section 6 to 35. The soil of this township varies from first- to second-class and consists chiefly of a good black loam from six inches to eight inches in depth with a clay subsoil and is evidently well suited for the raising of all kinds of ordinary farm produce, including oats and wheat, for, during the time that I was in the locality of this township I saw exceptionally fine crops of oats and wheat harvested in sections 6 and 16, large portions of which sections were under cultivation. This township is largely composed of very hilly timber country, but it is intersected in a northeasterly and southwesterly direction by the valley of Birdtail creek, from a half to two miles in width, which is chiefly prairie land of apparently very fine quality. The whole of this township, excepting the valley of Birdtail creek, is covered with timber, chiefly poplar, but a few groves of spruce occur in the more northerly and easterly sections. An old sawmill was located in section 13, but it has now been removed, as nearly all of the timber suitable for the manufacture of lumber has been culled out. The surface of this township being somewhat drier than the average in this district, the occurrence of hay marshes is not as common as elsewhere; however, several may be found in various parts, notably in sections 1, 5, 9, 16, 25 and 34. Although few lakes occur it is particularly well watered by Birdtail creek, which flows in a southwesterly direction through sections 35, 26, 27, 22, 21, 16, 17, 18 and 7. The water of this stream is fresh and good and contains large numbers of fine fish. In addition to this stream and some small tributaries there is a large lake in the southeast part of the township covering portions of sections 1, 2, 11 and 12; also another lake covering portions of sections 24 and 25, and still another of considerable size, chiefly in section 32, all of which contain fresh water. Birdtail creek, which is a stream averaging about thirty feet in width, two or three feet in depth, with a velocity of about two miles per hour, affords a certain amount of water-power, though comparatively limited in extent. The remains of an old mill dam were found in section 35, showing that the water-power of this stream has already been recognized as available in the manufacture of lumber. This township having been surveyed chiefly during the month of October, cool autumn weather was experienced, but judging from the fine crops of grain which were harvested, the climate must be such as to admit of the growing and ripening of these crops, and it may be taken as the best evidence that no severe summer frosts had occurred. Everywhere upon the higher hilly portions of this township may be found an abundance of good poplar woods for purposes of fuel. Spruce is also found in some places, though in quite limited quantities. No stone-quarries are known to exist in this township, although in some places, particularly in sections 22 and 23, very rough rocky hills occur, and it is possible they may contain good stone for building purposes. No minerals of economic value are known to occur. This township, being situated immediately to the south and adjoining the timber reserve, it is the frequent haunt of several varieties of wild animals, notably moose, elks and jumping deer. Prairie-chickens and ruffed grouse are also quite numerous.—*J. W. Tyrrell, D.L.S., 1904.*

(*North outline.*)—The land along this line is timbered with spruce, poplar, **22.** birch and tamarack. There are numerous small lakes and ponds. Birdtail creek flows southerly through section 31. The land is of third and fourth-class quality.—*G. M. Kingston, D.L.S., 1875.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 24.—*Continued.*

(*East outline.*)—The line along the east boundary of this township for two

23. miles from the north passes through dense poplar woods, the timber being of large size, scattered spruce occurring in places. From the northeast corner of section 24 to the east half of section 12 the timber is mostly dry spruce of large size, fire-killed, and in places blown down. This is an excellent timber limit, but the timber should be removed at once, as every year it will depreciate in value, and, being dry, fire will destroy much more of it than if green. Near the southeast corner of section 36 the line crosses the bed of a stream containing water in pools, which was found to be cold and good. Near the south end of the township there are some muskegs, lakelets and marsh meadows. The timber here is poplar and willow. The soil throughout is first-class.—*T. Fawcett, D.T.S., 1900.*

(*North outline.*)—The country along this line is mostly scrubby prairie with occasional bluffs of poplar. There are a number of dry watercourses running through the township. The soil is of first- and second-class quality.—

E. Bray, D.L.S., 1890.

(*Subdivision.*)—The surface of this township is very undulating, and rises rapidly to the west and south. The soil is a rich clay loam from five to eighteen inches deep with a gravelly clay subsoil. The creeks coming down from the mountains to the south supply good, clear water. There is no hay in the township. The southern part is covered with large poplar and spruce, interspersed with numerous windfalls and brulé, while in the north there is a thick growth of scrub, with clumps of dry poplar. The two western tiers of sections seem mostly covered with large poplar containing brulé and windfalls.—*J. E. Woods, D.L.S., 1894.*

The two western tiers of sections in this township are mostly level and are covered with scattered tracts of poplar bush, some of the timber in which has a diameter of twelve inches. There are some patches of willow and scrub, which have a growth of long grass and are very wet. There is practically no open prairie, but there is a good deal of land that could be very easily cleared. There is sufficient wood for building and fuel, consisting mostly of spruce. The district was fire-swept some time ago, and now supports a thrifty growth of young poplar. The soil is a heavy clay loam with some limestone gravel in places. Grass is abundant, and good water may be obtained by digging a short distance under the surface.—*J. McAree, D.T.S., 1902.*

(*North and east outlines.*)—This township is nearly all scrubby prairie, with

25. occasional patches of poplar and spruce woods, with willows. Most of the timber is dead. The soil is of first- and second-class quality. Valley river, which is about one chain wide, flows in an easterly direction across the township.—*E. Bray, D.L.S., 1890.*

(*Subdivision.*)—The surface is slightly undulating, and the soil mostly clay loam with a clay subsoil. It is covered with scrub and a few scattered clumps of large poplar timber. There are a few small strips of prairie in places along Valley river. For cattle-raising or grain crops it is admirably adapted. In no section is there anything but first-class soil. There are a number of fine hay marshes throughout the township, furnishing an abundance of hay. Valley river flows in an easterly direction through the centre of the township; it averages about fifty feet wide and has a depth of about two feet.—*J. Vicars, D.L.S., 1890.*

(*East outline.*)—Along this line the country is mostly scrubby prairie with

26. bluffs of poplar, much of which, however, is dead, and patches of scrub and willow. There are a number of small marshes in section 12. The country along the southern boundary is of a similar character; the soil throughout the township is of first-class quality.—*E. Bray, D.L.S., 1890.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 24.—*Continued.*

(*Subdivision.*)—The southeast half is generally a heavy, rolling, burnt country overgrown with scrub. The soil is of the best quality, consisting of a deep black loam with a clay subsoil. It is well watered by numerous small streams, and is well adapted to mixed farming. The northwest quarter of the township appears to be very hilly, and is occupied by Duck mountain; it also appears to be heavily timbered.—*P. R. A. Belanger, D.L.S., 1895.*

The sections surveyed have a small amount of timber on them, also small poplar and scrub, with prairie and hay sloughs. A spring rising in the southeast quarter of section 6 flows eastward into section 5, and furnishes an abundant supply of good water. This spring deposits a little bog iron ore. Grand View being only ten miles distant, the settlers of this neighbourhood have no freight problem, especially as the Canadian Northern railway will have a siding in the southeast quarter of section 1 in tp. 6-25-Pr.—*J. McAree, D.T.S., 1902.*

From township 26, range 26, we followed the Grand View trail to a road running north along the east boundary of section 3, township 26, range 24. This road we followed north as far as the northeast corner of section 22. The soil, in the part of the township surveyed, was very light and of poor quality. The surface is very rolling and uneven and covered with a heavy growth of poplar and willow scrub, with large patches of poplar and spruce to the north and west. There are a few hay sloughs but good hay is not plentiful. A few streams of very good water flow through the township in a southeasterly direction. These streams are fed by springs and do not dry up during the summer. The land is not liable to be flooded. No water-power is available in the township. The climate is dry and subject to summer frosts. Poplar and spruce, for fuel, can be had in the northern part of the township, but no coal nor lignite exist. No stone suitable for quarrying nor minerals of economic value exist in the township. Moose, elks, jumping deer and black bears are very plentiful, as are also partridges, prairie-chickens and rabbits.—*C. Harvey, D.L.S., 1904.*

Sections 21, 28 and 33 are situated east of the Duck Mountain Forest reserve. The surface is heavily rolling and covered with poplar and willow scrub. The soil is black loam, eight to ten inches deep with clay, sand and stones. There were no settlers in these sections at the time of survey. The water in the sloughs and streams is good. There is some good poplar suitable for building purposes in section 28.—*W. J. Deans, D.L.S., 1908.*

(*East outline.*)—The character of the country along this line is similar to
27. that along the north outline of township 27, range 23. A small branch of Valley river is crossed near the north of section 25 where a few stacks of hay have been cut in the neighbouring marshes by settlers from Gilbert plains.—*J. C. DesMeules, D.L.S., 1900.*

(*North outlines, ranges 24 to 29a.*)—Except for about five miles, the line passed through *brulé* or partial *brulé* until the vicinity of Shell river was reached when scrub took the place of timber. In ranges 24, 25, 26 and the eastern part of range 27 there was evidently a heavy forest of spruce, jackpine, tamarack, poplar and some birch, but probably about twenty years ago a fire swept the country, killing most of the timber. The burned tract is, however, growing up again with young spruce, jackpine, poplar, etc., and in time will replace the forest that was burned. To the south of the line the green original forest could be seen at a distance of about a mile, but to the north the *brulé* extended as far as the eye could see. The surface is for the most part rolling, and in some places appears thrown up into low, interrupted ridges with apparently a general northeast and southwest trend. The soil is a dark or yellow

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 24—*Concluded.*

clay loam, with a clay subsoil for the most part, and would no doubt produce fair crops under cultivation. The Shell river is a fine stream from thirty to fifty feet wide, winding through a valley about forty chains in width. Sawlogs have been driven down for a number of years.—*J. McAree, D.T.S., 1902.*

(*East outline.*)—This line runs over the southeastern slope of Duck mountain, where the country is frequently broken by deep ravines containing small streams running eastward. A heavy forest of poplar and spruce from six to twelve inches in diameter, together with a thick underbrush and fallen timber, cover the ground in sections 25, 24 and 13; the country throughout the remainder of the sections was burnt and is now covered with young poplar, alder, willow and scrub.—*J. C. DesMeules, D.L.S., 1900.*

(*North outlines, ranges 24 to 26.*)—To reach this work we made use of a
32. lumber road running out from the Dauphin and Swan River trail, and also of the old cart trail made by the party who ran the 9th base line across range 23, but we had to do a good deal of chopping to clear them out. In range 24, the line crosses the gorge of Pine river. This gorge is in sections 2 and 3, township 33, and is about one hundred feet deep. We crossed several small lakes in ranges 25 and 26; one, however, was over one hundred chains across. The country may be described as gently rolling, the trend of the ridges where they are developed being north and southwest. The soil is a brownish loam or clay loam with a clay subsoil. Not many hay sloughs were seen. The line throughout its entire course passes through *brulé*, about fifteen or twenty ears old. The country was covered with a dense forest of heavy spruce, jackpine and tamarack up to about the east boundary of section 3, where heavy poplar and balm of Gilead commence. Much of the timber has fallen and is piled up, making most formidable barriers. A good deal of spruce is still hard and sound. The jackpine is more generally decayed. There is a thick growth of young trees, such as jackpine, spruce, tamarack, poplar, balm of Gilead, birch, etc., and if let alone the country will revert to forest. In range 24, especially, there are many tracts on which there is a very dense growth of young jackpine. Small game, such as rabbits, partridges, prairie-chickens, and ducks, were moderately plentiful. Jumping deer appear to be still fairly numerous along the western side of Duck mountain in the scrub and bluff country. A number of elks were seen along the eastern side of the mountain. Moose were plentiful. We crossed the trail of a small band of timber wolves on Duck mountain in December.—*J. McAree, D.T.S., 1903.*

RANGE 25.

(*East and south outlines.*)—Along these lines the land is an undulating prairie
17. with occasional bluffs of poplar and clumps of willow brush. There are a few patches of hay swamp. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—The greater part of this township consists of undulating prairie with small bluffs of poplar and willow. The soil is of first-class quality, well adapted to settlement. The greater part of sections 3, 10, 15, 21, and the western half of 22, are occupied by a deep marsh or morass which contains bad, stagnant water, caused by the discharge of a small stream known as Arrow river, which flows through the northeastern corner of the township, and empties into the marsh mentioned. There is no building timber nor enough wood for fuel in this township, but there is a sufficient quantity for all purposes in the valley of Birdtail creek, which flows through the adjoining townships on the west.—*W. Crawford, D.L.S., 1879.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 25.—*Continued.*

(*North and east outlines.*)—The land along these outlines is an undulating prairie with occasional bluffs of poplar and clumps of willow brush. The soil is a sandy loam of second-class quality. Birdtail creek flows in a southerly direction through section 31, at the bottom of a deep valley nearly a mile wide.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is an undulating prairie having a soil of fine quality that is well adapted to settlement. There are some small hay marshes and clumps of poplar and willow, but no timber of any consequence. There are quite a number of settlers in the northwestern portion of the township, in the vicinity of Birdtail creek. The main trail to Fort Pelly runs through this township from the southeastern to the northwestern corner. The eastern tier of sections is much flooded by the overflow of Arrow river.—*W. Crawford, D.L.S., 1879.*

19. (*East outline.*)—This line crosses a rolling prairie with occasional bluffs of poplar. The soil is very rich.—*G. M. Kingston, D.L.S., 1875.*

(*South outline.*)—This line crosses a rolling prairie with occasional hay marshes, bluffs of poplar and patches of willow. The soil is very rich, and of first-class quality. Birdtail creek flows in a southerly direction through section 5, the water of which is good.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—The soil in this township is rich and there is an abundant supply of wood, hay and water. The township is drained by Birdtail creek and its tributaries.—*J. A. Snow, D.L.S., 1880.*

(*North and east outlines.*)—Going south from the northeast corner of the township the first half-mile is in the valley of Birdtail creek. The next mile and a half is through poplar and birch woods. The line is here crossed by a number of coulées, some of them having streams running into Birdtail creek. The third and fourth miles pass through woods of small poplar. The country is generally level or slightly undulating. The soil is of first-class quality. Going west, along the northern boundary, the first two miles are prairie, and in the valley of Birdtail creek. The valley is about two miles wide, the hills on each side being from eighty to one hundred feet high. Those on the east are abrupt, but on the west there is a gradual ascent. The soil in the valley is of fair quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township has a rich soil, well suited for agricultural purposes. It is drained by Birdtail creek. There is plenty of wood, hay and water.—*J. A. Snow, D.L.S., 1880.*

(*East outline.*)—Sections 1, 12 and 13 are undulating prairie lands, with soil of second-class quality. Sections 24, 25 and 36 are timbered with poplar, spruce and willows. The soil is of third and fourth-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is on Riding mountain and is drained by Birdtail creek and its tributaries. The soil is very rich, and there is plenty of building timber.—*J. A. Snow, D.L.S., 1881.*

This township is situated about twenty miles north of Solsgirth station on the northwestern branch of the Canadian Pacific railway, and about six miles north of Rosburn, through which the Canadian Northern railway is at the present time being constructed. Ranchvale post office is situated within one mile of the southeast angle of the township and the main trail following the valley of Birdtail creek towards

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 25.—*Continued.*

Gilbert plains leads from Solsgirth on the Canadian Pacific railway, through this township by way of Rossburn and Ranchvale. The soil of this township is chiefly a rich black loam, becoming more sandy in character in certain sections towards the valley of Birdtail creek, where the subsoil is of a sandy or gravelly character, although the prevailing subsoil of the township is clay. The land in the township is well suited for the raising of general farm produce. Wheat and oats as well as other varieties of grain are already successfully raised in some sections, which for years have been occupied by Canadian settlers. The greater portion of this township is quite hilly in character and covered with poplar timber together with hazel and willow scrub, although some prairie is found in the valley of Birdtail creek in sections 1, 2, 11, 12 and 13. The timber of this township having been largely consumed by fire some years ago, the surface is chiefly covered by a young growth of poplar and in some cases the growth of willow and hazel scrub is very heavy. Large timber is still found in some sections, notably in portions of sections 9, 10, 14, 15, 20, 21, 22, 23, 25, 33, 34, 35 and 36. This township is abundantly provided with natural hay in the many sloughs which occur upon its surface. It is scarcely necessary to enumerate the sections in which these hay meadows occur since they may be found in almost every section in the township. There are no large bodies of water occurring in this township, but it is exceptionally well supplied with fresh-water streams, three of which flow in a southeasterly direction through the township and discharge into the main stream of Birdtail creek, which passes through sections 1, 2 and 12. The water of these creeks is fresh, and in Birdtail creek are to be found plenty of good sized jackfish as well as some other varieties. No water-power of any consequence occurs in this township. Judging from the number and extent of the farm products now grown in this township it is evident that the climate must be not unsuited for their production, excellent crops of wheat, oats, etc., having been harvested under my own observation. The poplar and spruce timber growing in various sections of this township forms an abundant local fuel supply. No stone-quarries nor minerals of economic value are known to occur. This township being much more settled than others adjoining it, game is now somewhat less abundant than formerly, but even yet it is no uncommon occurrence to meet with moose or jumping deer, whilst prairie-chickens are very numerous.—*J. W. Tyrrell, D.L.S., 1904.*

(*North and east outlines.*)—The land along the north outline is very hilly
22. with many small lakes and ponds and is timbered with spruce, balsam, and a few poplar and birch. The soil is of third-class quality. The country along the eastern boundary is of the same description, except that it is not quite so hilly.—*G. M. Kingston, D.L.S., 1876.*

(*East and south outlines.*)—Going south along the east outline the country
23. is open for four miles and is quite hilly. In section 13 a small stream of clear spring water is crossed, and near the south end of the same we crossed a stream of considerable size, supposed to be one of the principal branches of Birdtail creek, flowing through a tamarack muskeg. On each side of the muskeg the banks rise from 200 to 300 feet. The country south of Birdtail creek is exceedingly hilly, the hills reaching an elevation of from 200 to 300 feet. Water is plentiful in the hills in small spring creeks, and the timber large and of good quality, being poplar and spruce. The soil on the hills is somewhat sandy and would average about second-class, while that north of the valley is a dark loam, underlain with clay and might be classified as of first-class quality.—*T. Fawcett, D.L.S., 1890.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 25.—*Continued.*

(*North and east outlines.*)—The line across the northern boundary, running west, passes through heavy poplar woods the greater part of the distance. The surface is level, and near the westerly limit we pass some boggy lakes of alkaline water, surrounded by marshy meadows. Pleasant Valley creek is crossed in section 35, the water in this stream being clear and good. The soil is first-class, a clayey loam, underlain with clay. The timber would be suitable for manufacture, the poplar being large and thrifty. Scattered spruce of good quality occurs in some places. The country along the east boundary is of a similar description, though the timber has been much damaged by fire. In sections 1 and 12 there are some spots of open prairie and meadow lands.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—This township is situated in what is commonly known as "The Gap," that is, the country between Riding mountain and Duck mountain. The land is highly rolling, but not broken, and especially the two eastern tiers of sections are well adapted to farming purposes. This district has been fire-swept, leaving the country practically devoid of timber. Pleasant Valley creek runs northerly through the township. According to settlers' reports, no summer frosts occur.—*A. F. Martin, D.L.S., 1898.*

The route for reaching this township is by trail to Mountain Gap, thence south-westerly into the mountains in section 22. This is a good road when dry but rather heavy when wet. The soil is a fine black loam with clay subsoil; it is first-class farming land. The surface is gently rolling, mostly scrubby, but also prairie here and there over all the township. There is no timber of any account, except a few spruce about twelve inches in diameter, and some poplar and willow scrub. There are quite a few fairly good hay sloughs, scattered over the whole portion surveyed, but there is very little high hay meadow. The water is fresh and abundant. There are many small streams, which may dry up in summer, but one large one, Pleasant Valley creek, is about twenty-five feet wide, four feet deep and flows about four miles an hour. There is a good drainage and the land is not likely to be flooded. There is a little water-power on the large creek at the rapids but no falls. The climate is cool in May with some frosts. There was one heavy snowstorm and plenty of rain. For fuel there is plenty of dry spruce and poplar wood almost anywhere in the township. There are no stone-quarries and no minerals. Game is plentiful, apparently, but none was seen. Plenty of moose and deer tracks were observed. These sections are well settled. There is still some first-class land unsurveyed in the western part of the township, and there is only a little timber in the northwest corner.—*W. G. McFarlane, D.L.S., 1906.*

(*East outline.*)—The country along this line is a scrubby prairie, with scattered poplar and bluffs of poplar, a good deal of which is dead. The soil is of first- and second-class quality. Valley river flows in an easterly direction through the township.—*E. Bray, D.L.S., 1890.*

(*Subdivision.*)—This township is situated in what is commonly called "The Gap," that is between Duck mountain and the Riding mountains. The land is, in consequence, high and rolling, but not broken. The soil is generally of good quality, and the two eastern tiers of sections subdivided are very well adapted to farming purposes. Persons already settled there have had good crops every year and report that the country is free from summer frosts. Nearly all the timber is burnt and, in some places, the land is quite open. Pleasant Valley creek is a stream of good water which runs in a northeasterly direction through sections 1 and 2, and empties into Valley river which crosses sections 24, 25, and 26. The soil in the vicinity of the river is rather light.—*A. F. Martin, D.L.S., 1898.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 25—*Concluded.*

(*North outlines, ranges 25 and 26.*)—This work was reached by following
26. the Burrows lumber road which passes in a northerly direction along Valley river from the Valley River Indian reserve. The reserve is reached by a good trail from Grand View. The soil along these two northern boundaries is generally a clay loam with clay subsoil, and when cleared will be suitable for mixed farming. Good vegetables are grown successfully on the reserve four miles south. The country is heavily timbered with poplar and spruce, and the surface is rolling. The water in the Valley river is fresh and has a rapid current, but no water-powers were seen. In the lakes the water is very alkaline. It is probable that this district, in the timbered hills, is more subject to thunder storms than the prairie district and, at present, more liable to summer frosts. There does not appear to be any hay available. Wood for fuel is plentiful. No minerals, or stone suitable for quarrying were seen. There appears to be an abundance of large game such as moose, deer, and bears. Extensive lumbering operations are being carried on along the Valley river in this vicinity and farther north. The logs are floated down the Valley river to a large saw-mill in Grand View.—*C. F. Aylsworth, D.L.S., 1903.*

(*East outline.*)—The line along the easterly limit of this township passes through timber, mostly poplar, with dense underbrush. At the southeast corner of section 12 a beautiful stream of clear spring water flowing southeasterly is crossed, and in section 25 the same stream is again crossed, flowing southwesterly. When crossed the second time the banks rise to an elevation of some 200 feet in half a mile on each side. The soil being sandy, is about second-class quality. The timber would be suitable for all purposes.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—Sections 1, 2, 11, 12, 13 and 14 in this township were surveyed. Section 2 and the south half of section 12 are taken up. The land is level, with numerous hay marshes. A general description would be level land, black clay in some places, and black sandy loam, in some others, clumps of poplar up to fourteen inches with young poplar and willow scrub, prairie openings, hay sloughs, heavy grass among the scrub and willow and somewhat extensive areas of bush on sections 13 and 14 and the northwest quarter of section 12. The south halves of sections 1 and 2 were covered by a heavy poplar bush, which, with the exception of scattered trees, has been removed by bush fires. Settlers who secured land in this locality have been fortunate, since the Canadian Northern railway runs through sections 1, 2, etc., of this township. The land is fit for mixed farming or for ranching. Water can be had by digging about twenty feet.—*J. McAree, D.T.S., 1902.*

RANGE 26.

(*South outline.*)—This outline traverses an undulating prairie with occasional bluffs of poplar and willow brush. The soil is sandy loam of second-class quality. Birdtail creek flows in a southwesterly direction through section 6.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is broken by Birdtail creek which runs through it in a southwesterly direction. The valley of the creek is some 250 feet in depth and three-quarters of a mile in width. The valley on the western side is generally open and stony, but on the eastern slope there is some good poplar timber, though not sufficient to supply the settlers for building purposes. The general features of the township are an undulating prairie with poplar bluffs, clumps of willow, small ponds and hay marshes. The land is of good quality and the township is being rapidly settled up.—*W. Crawford, D.L.S., 1879.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 26.—*Continued.*

- (*North outline.*)—The country along this line is an undulating prairie with scattered bluffs of poplar. The soil is a sandy loam of second-class quality. —*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—The eastern tier of sections is much broken by the valley of Birdtail creek, which flows through a deep valley from 100 to 200 feet in depth, in a southerly direction. There is no timber of any value in this township, that on the western side of the creek being of inferior quality. However, timber may be easily obtained in the forests to the north and floated down the creek during high water. The soil is generally of good quality and fit for settlement. —*W. Crawford, D.L.S., 1879.*

- This township is rolling prairie, with some small ponds and marshes, also scattered clumps of poplar and willow and some scrub. It contains two lakes that have areas exceeding twenty acres. The soil is first- and second-class.—*J. A. Snow, D.L.S., 1880.*

This township is broken by the Lizard Point I. R., which occupies seven sections in the northwest corner. The rest of it, excepting small patches of first-class land in the northwesterly and southwesterly corners, is too low for tillage, but contains some good hay land. A sluggish stream having low banks flows through the north-western portion.—*W. Beatty, D.L.S., 1882.*

- (*North outline.*)—The country along this line is rolling prairie, with scattered bluffs of poplar and willows and many small lakes and hay marshes. The soil is of second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is mostly prairie, with some heavy poplar, willow and hazel scrub. There is a chain of lakes of considerable size in the western portion of the township and numerous small ponds occur elsewhere. The soil is principally first- and second-class with some third-class.—*J. A. Snow, D.L.S., 1880.*

This township is broken by small ponds and lakes and by the Lizard Point I. R. which occupies six sections in the northeast corner. The soil is a deep, black loam upon a clay subsoil, and is covered to a great extent by thick scrub and some patches of poplar which are of no value for timber. Extensive drainage will be required before this township will be in any way fit for settlement.—*W. and D. Beatty, D.L.S., 1882.*

- This township is rolling prairie, nearly all covered with bush, chiefly poplar and balm of Gilead. The soil throughout is excellent, and is drained by a large creek. There are three or four tolerably large lakes in the easterly portion.—*J. H. Reiffenstein, D.L.S., 1881.*

This township is situated about twenty miles north of Solsgirth station on the northwestern branch of the Canadian Pacific railway and about six miles north of Rosburn, through which the Canadian Northern railway is at the present time being constructed. Ranchvale post office is situated within one mile of the southeast angle of the township and the main trail, following the valley of Birdtail creek towards Gilbert plains, leads from Solsgirth on the Canadian Pacific railway, through this township by way of Rosburn and Ranchvale. The soil of this township is chiefly a rich black loam, becoming more sandy in character in certain sections toward the valley of Birdtail creek, where the subsoil is of a sandy or gravelly character, although the prevailing subsoil of the township is clay. The land in the township is well suited for the raising of general farm produce. Wheat and oats as well as other

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RANGE 26.—*Continued.*

varieties of grain are already successfully raised in some sections, which for years have been occupied by Canadian settlers. The greater portion of this township is quite hilly in character and covered with poplar timber, together with hazel and willow scrub, although some prairie is found in the valley of Birdtail creek in sections 1, 2, 11, 12 and 13. The timber of this township having been largely consumed by fires some years ago, the surface is chiefly covered by a young growth of poplar and in some cases the growth of willow and hazel scrub is very heavy. Large timber is still found in some sections, notably portions of sections 9, 10, 14, 15, 20, 21, 22, 23, 25, 33, 34, 35 and 36. This township is abundantly provided with natural hay in the many sloughs which occur upon its surface. It is scarcely necessary to enumerate the sections in which these hay meadows occur since they may be found in almost every section in the township. There are no large bodies of water but the township is exceptionally well supplied with fresh-water streams, three of which flow in a southeasterly direction through the township and discharge into main stream of Birdtail creek, which passes through sections 1, 2 and 12. The water of these creeks is fresh, and in Birdtail creek there are plenty of good sized jackfish, as well as some other varieties. No water-power of any consequence occurs in this township. Judging from the number and extent of the farm products now grown here it is evident that the climate must be not unsuited for their production, excellent crops of wheat and oats having been harvested under my own observation. The poplar and spruce timber growing in various sections forms an abundant local fuel supply. No stone-quarries nor minerals of economic value are known to occur. As the township is much more settled than others adjoining it, game has become scarce, but even yet it is no uncommon occurrence to meet with moose or jumping deer, whilst prairie-chickens are very numerous.—*J. W. Tyrrell, D.L.S., 1904.*

(*North outline.*)—Along this line the surface is hilly in places, and is
22. covered with poplar, birch and spruce. Some very large sound timber is to be found in section 34. The soil is of second-class quality. There are many small lakes and ponds.—*G. M. Kingston, D.L.S., 1876.*

(*Subdivision.*)—This township is somewhat hilly, and covered with bush which is chiefly poplar, balm of Gilead and white birch. The soil is excellent throughout.—*J. H. Reiffenstein, D.L.S., 1881.*

This township is situated near the summit of Riding mountains, and the surface is gently rolling to hilly; the northeasterly portion is a labyrinth of small hills from ten to twenty feet high and not more than two to three chains in their largest diameter. There are numerous small lakes scattered throughout, some of which are of fair size. The lakes in sections 28, 29, 32, and 33 are fed from springs, and the water is of good quality, but the water in the rest of the lakes is poor and alkaline, giving off a very disagreeable odour when opened up in winter. The township has been overrun by fire which destroyed most of the valuable timber, leaving the surface covered with fallen timber and a thick growth of poplar, willow, and hazel scrub. The soil is sandy loam about six inches in depth with some stone in places.—*W. A. Ducker, D.L.S., 1898.*

(*East outline.*)—This outline is thickly timbered, except in small patches
23. where marshes and muskegs abound. The timber, consisting of poplar, spruce and birch, is generally of good quality. A stream of considerable size was crossed in section 24. I took this stream to be one of the principal branches of Birdtail creek. Near the southern portion of this township the surface is very hilly, the hills rising several hundred feet in some instances. The soil is good and

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RANGE 26.—*Continued.*

fresh water is plentiful. In section 13 we saw a quantity of maple which had been utilized by the Indians in the spring in making maple sugar. The woods are full of hazel and wild cherry trees and we also saw several fine trees, with wild plums beginning to ripen on the 10th September.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—Section 6 is rolling prairie somewhat scrubby in the south part, with a few hay marshes. The soil is black loam about twelve inches deep, with clay subsoil. The settlers are engaged in mixed farming. Fuel can be obtained on the Riding mountains where there is any amount of fallen timber suitable for that purpose. The water is good in the sloughs and wells.—*W. J. Deans, D.L.S., 1908.*

(*North and east outlines.*)—The northern outline traverses heavily timbered
24. land, with dense hazel, cherry and other scrub. Near the western boundary the country is much broken by lakes, which form no inconsiderable portion of the area, one crossed in section 35 being nearly three-quarters of a mile long. The water in these lakes is slightly brackish, but is fit for use. The soil is first-class and the timber merchantable; the poplar and scattered spruce are of large size. The eastern boundary, for the first four miles from the north, passes through heavy woods, principally poplar, with occasional spruce and birch. The country south of this becomes broken by lakes and hills, and the southern boundary of the township terminates in a large muskeg which is over two miles in length and a mile in width, covered with a dense growth of reeds and rushes. The soil throughout, with the exception of the muskeg mentioned is first-class and most of the water is good.—*T. Fawcett, D.T.S., 1890.*

(*East outline.*)—The east boundary passes through dense poplar woods,
25. broken by a few marshy meadows, which contained excellent hay. Near the north end of the township a few good spruce were found scattered among the poplar. There are several small streams, containing good water traversing the township. The soil is mostly first-class.—*T. Fawcett, D.T.S., 1890.*

(*East outline.*)—After leaving the post at the southeast corner and going
26. north twenty chains we come to a prairie extending two miles, broken only by belts of timber along Valley river, which is crossed in section 12. There is some splendid timber along Valley river, not a great quantity, but large and of good quality, and the stream is large enough to float logs in the spring.—*T. Fawcett, D.T.S., 1890.*

(*Subdivision.*)—The soil is generally a clay loam with clay subsoil, and when cleared it will be suitable for mixed farming. The surface is rolling and heavily timbered with poplar and spruce. In the lakes the water is very shallow. No stone was seen suitable for quarrying, and no minerals were found.—*C. F. Aylsworth, D.L.S., 1903.*

The road from township 27, range 27, runs from Clarke's ranch southwesterly as far as Shell river; thence along the river valley until it joins the main road running to Grand View. The road is in good condition all the way to township 26, range 26. The soil is a clay loam four to twelve inches deep with a clay subsoil. The surface is very rolling and uneven and covered with a light growth of poplar and willow scrub. A few patches of open country are found along the north side of Short creek and some spruce extends along the northern part of sections 13, 14 and 15. Hay meadows extend along each side of Short creek, from which about 200 tons of very good hay

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 26—*Concluded.*

might be cut. Valley river, which flows southerly through sections 12 and 13, is about fifty feet wide, from two to three feet deep, and flows about four miles an hour. The water in it is very fresh and good. Short creek, which flows easterly through sections 7, 8, 9, and 10, is about six feet wide and two feet deep. The valley through which it flows is low and flat and covered in many places by muskeg and hay sloughs. The land, except in Short creek valley, is not liable to be flooded. No water-power is available in the township. The climate is dry and liable to summer frosts. Spruce and poplar for fuel can be had in any part of the township, but no coal nor lignite exists. No stone-quarries nor minerals of economic value exist in the township. Partridges, prairie-chickens and rabbits are plentiful, and a few deer are found in the northern part of the township.—*C. Harvey, D.L.S., 1904.*

RANGE 27.

(*East and south outlines.*)—The country along these lines is an undulating
17. prairie, with occasional bluffs of poplar and clumps of willow. The soil is a good sandy loam of second-class quality. Birdtail creek flows through a deep valley in sections 1 and 2. There are many large boulders strewn on the prairie flats in the valley.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie, traversed by several small creeks, and dotted with small patches of scrub willow and occasional clumps of poplar which is sufficiently large for fencing purposes. The soil is a friable loam from one to two feet deep, with clay subsoil.—*F. W. Armstrong, D.L.S., 1880.*

(*North and east outlines.*)—These lines traverse an undulating prairie with
18. scattered bluffs of poplar and clumps of willow brush. There are a number of small hay swamps throughout. The soil is a good sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie, rather broken by sloughs and dotted over with clumps of poplar and willow. Two or three creeks traverse the township. The soil is a rich black loam.—*F. W. Armstrong, D.L.S., 1881.*

(*South outline.*)—The country along this line is an undulating prairie,
19. with a few poplar bluffs with willow scrub, and occasional small hay swamps. The soil is a first-class sandy loam.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—This line traverses a rolling prairie, with scattered clumps of poplar, and a number of small hay swamps. The soil is of second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—The southeastern portion of this township is much broken by lakes; the remainder is well adapted to agricultural purposes. The soil is a rich black loam, and there is sufficient poplar for settlers' requirements.—*C. A. Lett, D.L.S., 1880.*

(*North outline.*)—This line runs over a rolling prairie, with occasional
20. bluffs of poplar. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—The country along this line is rolling prairie, with scattered clumps of poplar and willow. The soil is of second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is undulating prairie with a rich soil. Good water is supplied by a creek which traverses the township.—*C. A. Lett, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 27.—*Continued.*

- 21.** (*East outline.*)—The country along this line is a rolling prairie with bluffs of poplar and willow. There are a number of small hay meadows. The soil is of first- and second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with bluffs of poplar and balm of Gilead. Two creeks cross the township. The soil is excellent.—*J. H. Reiffenstein, D.L.S., 1880.*

- 22.** (*North outline.*)—This outline traverses rolling prairie with heavy poplar woods, and hay swamps in sections 34, 35 and 36. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—The surface along this line is undulating, and covered with poplar woods and numerous hay marshes. There is some prairie land in section 1. The soil is of third-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with clumps of poplar, balm of Gilead and birch. The soil throughout is first-class. The township is well watered by three small lakes and numerous hay marshes.—*J. H. Reiffenstein, D.L.S., 1880.*

- 23.** (*East and south outlines.*)—The land traversed by these lines is generally timbered with poplar and some willow and poplar scrub. There are many stretches of open, rolling prairie land, and a number of small lakes and ponds with good water. The soil is a sandy loam of first-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township is alternately woods and prairie with a very good soil throughout. A road runs through the township.—*W. and D. Beatty, D.L.S., 1880.*

- 24.** (*North and east outlines.*)—Along the eastern and northern boundaries the land is rolling and timbered with poplar and white birch, with a thick undergrowth of hazel and willow. There are a number of small lakes, ponds and hay marshes. The soil is a sandy loam with a clay subsoil; it is of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The surface of this township has an excellent soil and is well timbered throughout. There are a few small lakes and muskegs in the woods. McKay's trail crosses the township.—*W. and D. Beatty, D.L.S., 1880.*

- 25.** (*East outline.*)—Along this line there are a great number of small lakes and marshes scattered throughout. The land is timbered with poplar, white birch, maple and an undergrowth of hazel, willow and cherry. The soil is a sandy clay loam of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—With the exception of portions of sections 32 and 33, this township is nearly all third-class land, and of little value for agricultural purposes. About two-thirds of the township is covered with heavy poplar, scattered birch and willows, with heavy windfalls in places. Shell river, in a valley 250 feet deep, flows through the northwestern part of the township. The average width of the valley is about one mile. The average width of the river is about ninety links, and its depth from three to eight feet, with a current of four miles per hour; it would form a very convenient means of floating down timber. All the water in the township is fresh and good.—*Staunton and Jones, D.L.S., 1881.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 27.—*Continued.*

(*North and east outlines.*)—The land is rolling, and generally timbered
26. with poplar, birch and spruce, with a great deal of scrub, consisting of willow, hazel and maple. A considerable part of the timber is fire-killed, and young maple is now growing up. There are numerous small lakes and ponds throughout the township. Shell river flows in a southerly direction through section 31. The soil is a rich, black, sandy loam of first-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The greater portion of this township is unfit for agricultural purposes, although fairly suited for grazing. A few sections in the valley of Shell river may be available for settlement, and rank second-class. Shell river, in a deep valley a mile in width, flows through the western portion of the township. There is a great deal of poplar, with some oak, birch, spruce, tamarack, willow scrub and burnt and fallen timber. The township, as a rule, is very rough and broken.—*Staunton and Jones, D.L.S., 1881.*

There is a siding on the Canadian Northern railway in section 32, township 25, range 27; from there trails lead northerly and northeasterly into this township, passing up through Shell River valley to the north boundary and then, parallel to the railway, to the east boundary. The soil is sandy loam in the southwest corner and clay loam in the remainder of the township; there are some stony hills in the northeast portion. The soil is suitable for mixed farming. The surface is heavy rolling prairie in the southerly half and scrubby in the north, with old stumps and windfall. There are fringes of spruce, tamarack and poplar, around some of the ponds and lakes, which are large enough for building logs and fence posts. Most of the sloughs are too wet for hay, but after a number of dry seasons there would be a considerable quantity available. Several lakes have good water. Shell river flows through the westerly half of the township and Takwa creek through the easterly. Shell river, averaging 125 links wide and two feet deep, gives a sufficient and permanent supply all the year round for all purposes. No water-power can be developed along this river in this township. The season was moderately dry with some light frosts on and after August 20. Large quantities of old stumps and windfall for fuel may be procured in the north half of the township; the young poplar, in a few years, will supply sufficient for the needs of the settlers. No rock-in-place was seen, but plenty of limestone and granite boulders exist in the northern portion of the township. Partridges and rabbits are very plentiful. Only two settlers were living in the township, but many of the homesteads are taken up.—*J. Francis, D.L.S., 1904.*

From township 28, range 27, we moved back over our old trail as far as section 16, where we found a road running southeasterly into township 27, range
27. This road goes around the east side of Clarke lake and then runs in a southwesterly direction as far as Shell river, where it joins the Shell River road. The soil in this township is light and of poor quality. The surface is very rolling and uneven and covered with a heavy growth of poplar and willow scrub, with windfall and burnt timber in some places. Some spruce and black poplar, fifteen to twenty inches in diameter, were found in the southeastern part of the township, but the best timber has been all logged out already. Many lakes and hay sloughs are to be found in all parts of the township. About 600 tons of hay are available. A rancher who lives in section 26, cuts all the available hay for wintering his cattle. A few small streams flow through the township and Shell river cuts across the southwest corner of it. The water in the lakes is fresh. The land is not liable to be flooded at any time of the year. No water-power is available in the township. The climate is dry

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 27—*Concluded.*

and subject to summer frosts. Spruce and poplar for fuel can be had in any part of the township but no coal nor lignite exists. No stone-quarries nor minerals of economic value are found in the township. Moose, black bears, partridges, prairie-chickens, and rabbits are plentiful.—*C. Harvey, D.L.S., 1904.*

To get to this township from township 31, range 29, we had to come back over
28. our old road as far as section 15, township, 29, range 29, where we found a good road going in a southeasterly direction as far as Shell river, where there is a good ford. On the east side of the river there are old timber roads running in all directions, and we had no difficulty in finding one leading into the centre of this township. The soil is light and of poor quality. The surface is very rolling and uneven and covered with a heavy growth of poplar and willow scrub, with windfall and burnt timber in some places. Some spruce and black poplar from fifteen to twenty-four inches in diameter are found in sections 24, 25, 26, 35 and 36. These would supply building logs for settlers, or a limited quantity of lumber could be got from them, but the best of the timber has already been removed. A few spruce from six to ten inches in diameter are also to be found in the swamps in different parts of the township. There is no hay of any account. A few streams of very good water flow through the township, and many lakes are to be found in all parts of it. The water in the lake is fresh and pike and mullet are plentiful in Angling lake. No land is liable to be flooded. No water-power is available. The climate is dry and subject to summer frosts. Wood for fuel can be had in any part of the township, but no coal or lignite seams were noted. No stone-quarries nor minerals of economic value exist in the township. Moose, black bears, partridges, and rabbits are the only game found.—*C. Harvey, D.L.S., 1904.*

(*North outline.*)—This line runs through very rough, hilly and broken
32. country, crossing numerous coulées and ravines varying in depth from sixty to two hundred feet, and is thickly timbered with spruce and poplar varying in size from four to forty inches in diameter. Recent fires have destroyed most of this immense timber, which has been blown down and lies piled in tangled heaps, making the travelling most difficult and tedious even with pack horses. The line intersects numerous streams, the water of which is clear and very hard. The soil may be classified as second- and third-class; the surface soil of black loam varies in depth from two to four inches with a subsoil of gumbo or gravelly clay. Many of the higher ridges are covered with boulders and gravel.—*E. W. Hubbell, D.L.S., 1898.*

RANGE 28.

(*South outline.*)—The country along this line is an undulating prairie with
17. occasional bluffs of poplar and clumps of willow brush. The soil is a sandy loam of second-class quality. The Assiniboine river flows through a valley about 200 feet deep, in section 4.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie. The soil is a dark, friable loam, with clay subsoil. The township is watered by a large creek and Assiniboine river. There is a fair quantity of timber.—*E. W. Armstrong, D.L.S., 1880.*

(*North outline.*)—The country along this line is an undulating prairie,
18. with occasional bluffs of poplar and willow. The soil is a good sandy loam of second-class quality. Section 31 is much broken by the deep valley of a creek.—*J. McLatchie, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

(*Subdivision.*)—This township is rolling prairie, broken towards the northwest by deep ravines and gullies. The soil is very rich and deep. It is well watered by what is locally known as Snake river and two large creeks. There is a fair proportion of timber.—*W. Armstrong, D.L.S., 1880.*

(*South outline.*)—Along this line the country is a high rolling prairie, with
19. bluffs of poplar and scrub. In places there is some small oak, and section 4 is heavily timbered with poplar. This section is broken by ridges and ravines; Silver creek, a stream of clear cold water about two feet in depth, with a swift current, flows through it. The soil is of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie with a black loam soil. It contains sufficient poplar bush for the requirements of settlers.—*C. A. Lett, D.L.S., 1880.*

(*North outline.*)—This outline traverses a rolling prairie which sustains a
20. growth of scattered willow bushes and bluffs of poplar. There are many small hay marshes. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is well adapted to settlement, as the soil is a deep black loam of first-class quality and there is sufficient poplar for the requirements of settlers.—*C. A. Lett, D.L.S., 1880.*

(*South outline.*)—The country along this line is a rolling prairie, with scat-
21. tered bluffs of poplar with scrub, and a number of small hay swamps. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is a rolling prairie, dotted with bluffs of poplar, and broken on the west by a deep gully, through which a large creek flows. There are a number of small lakes; the water in three of them is salty, but in the others it is fresh. The timber is useful only for fence rails. The soil throughout is very good.—*J. H. Reiffenstein, D.L.S., 1880.*

(*North outline.*)—The country traversed by this line is a rolling prairie,
22. with occasional bluffs of poplar. Shell river flows through a deep valley 200 to 300 feet below the prairie level in section 32. In the valley there is heavy poplar with dense scrub. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with bluffs of poplar, some of which is large enough for building purposes. A creek traverses the southern half. The soil throughout is first-class.—*J. H. Reiffenstein, D.L.S., 1880.*

The regular centre meridian road allowance through this township leads into the village and station of Russell, Manitoba. It is more or less improved and graded by the municipal corporation of Shell River. The soil is mostly a black loam, resting on a clay subsoil and is admirably adapted to grain raising. The surface is gently rolling, mostly prairie, interspersed with bluffs of poplar and willow scrub, presenting a beautiful park-like country. No timber of any value now remains, but if no fires are allowed to run, in a few years some of the bluffs will supply fuel. No hay sloughs of any extent exist. All the water is fresh and good. Shell river touches the township on the north boundary of section 32. A small creek crosses the township from east to west, but will dry up during the summer. There is no land liable

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

to flooding. No water-powers exist. So far this season the regular Manitoba weather prevailed. There is, at present, very little fuel in the township, but wood may be procured north and northwesterly in the adjoining township. No coal nor other minerals have yet been found. Some gravel and boulder stones may be had in section 31. Ducks and prairie-chickens are plentiful. The township is fairly well settled and raises large quantities of grain and stock.—*J. Francis, D.L.S., 1904.*

(*South outline.*)—Along this line the surface is rolling prairie, with clumps
23. of willow scrub, occasional bluffs of poplar and a number of small lakes and ponds. In sections 1 and 2 the soil is a sandy loam of first-class quality. The remaining four sections are of poor quality. Shell river crosses this boundary; it flows through a deep valley which is 250 feet below the level of the surrounding country and is nearly a mile wide; the slopes are timbered with poplar. The river is one and one-half chains wide, five feet deep and has a swift current, gravel bottom, and good water.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The Shell river flows through the township. Its banks are covered with poplar. The rest of the land is alternate prairie and scrub with a very good soil.—*W. and D. Beatty, D.L.S., 1880.*

The main road from Russell to Tumbell and Goose lakes, passes northerly through this township; it is more or less improved by the local authorities, thus giving easy access to any part of the township. The soil is, in general, first-class, except along the edges of the valleys, where it is inclined to be stony. The surface is gently rolling, except where broken by valleys of Bear creek, Shell and Assiniboine rivers, these latter making the land hilly. Some poplar trees fit for building logs may be got along the western side of Shell River valley, especially adjoining the central meridian of the township. No hay sloughs of any size are to be found. All water is fresh and good. Shell river traverses the township from north to south, dividing it nearly equally. Bear creek coming from the east along or near the north boundaries of section 1 and 2, joins the former near the south boundary of section 10. There is considerable wood fit for fuel, growing along the sides of the valleys and lateral ravines, that are to be found in the township. These places are not fit for much else being very sloping. The current of Shell river is very rapid in places, affording plenty of head for water-power. No coal nor other minerals have yet been found. Plenty of granite and limestone boulders may be got along the valley of the river. A few deer and bears were seen, but no other game. A good many settlers are living in this township. East of Shell river nearly all the monuments have been destroyed by the fires which have taken place since it was first surveyed.—*J. Francis, D.L.S., 1904.*

(*North outline.*)—This outline traverses rolling prairie, with numerous
24. bluffs of small poplar and burnt spruce. The soil is a sandy loam of good quality. Shell river, the water in which is muddy and about six feet deep, flows in a southerly direction through the township with a swift current. The bed of the river is about 150 feet below the level of the surrounding country.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—Shell river flows through the township, the current being very strong. The land is alternate prairie and scrub. The soil is generally first-class.—*W. and D. Beatty, D.L.S., 1880.*

A good trail, improved along the road allowance in places, leading from Russell on the Canadian Pacific railway to Roblin, on the Canadian Northern railway, gives

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

easy access to this township. The soil is mostly a black or clay loam on a clay sub-soil and is suitable for the raising of grain or mixed farming. The surface is rolling, except along the valleys of Assiniboine and Shell rivers, where it is more or less heavily sloping. This township is largely prairie and scrub equally intermixed. There is no timber of any value. There is very little hay, but all the sloughs and ponds are liable to dry up. Shell river gives a permanent supply of fresh water at all times. This river, averaging one chain in width and two feet in depth, with a current of three miles per hour, gives a volume and strength of current sufficient for the running of sawlogs in the early summer season, for which it has been utilized more or less for some years. The land along this river is subject to flooding only at extremely high water, and then only for a short time. There were no water-powers observed. The usual Manitoba summer prevails, inclined to be slightly drier and cooler than ordinary. There are no summer frosts. Plenty of young growing poplar scrub in bluffs more or less in every section will, in the future, give plenty of fuel if not too much fire-killed. No coal, stone-quarries nor minerals exist, but there are plenty of boulders along the valleys of Shell and Assiniboine rivers. There was not much game seen while surveying this township. This township is largely taken up and the western half is well settled.—*J. Francis, D.L.S., 1904.*

A fair proportion of the land in this township is first- and second-class, and
25. well adapted to settlement, being partly open prairie with a plentiful supply of poplar, suitable for fuel and fencing. Shell river flows through the township in a southerly direction. The valley of this stream has a depth of 250 feet, with an average width of one mile. The depth of the river varies from three to eight feet, with a current of four miles an hour. A considerable area of the surface is very much broken by lakes, sloughs, ravines and the valley of Shell river.—*Staunton and Jones, D.L.S., 1881.*

Trails from Roblin, a station on the Canadian Northern railway, lead south and southeasterly into this township, giving easy access to any part of it. The soil is mostly a clay loam, suitable either for grain growing or mixed farming. The surface is rolling, except along the valley of Shell river, where it is broken by steep slopes. Scrub alternates with open places or prairie all over the township. There is no timber of any kind. There are a few sloughs. Hay is not very plentiful. Shell river and about half a dozen lakes in the northern part of the township contain good fresh water and give a plentiful supply at all times. Shell river, about one chain wide and with a depth varying according to the season, has a current of from three to four miles per hour. The flats along its banks are not subject to flooding except occasionally in the spring after a heavy winter's snowfall. There are no waterfalls on the river but by damming it, small amounts of power might be developed. Plenty of young, green scrub, if not fire-killed, will give considerable fuel in a few years. No coal, stone-quarries nor minerals were found, but there are plenty of boulders along the valley of Shell river. Ducks, prairie-chickens, partridges and rabbits are plentiful. The Canadian Northern railway passes through sections 25, 26, 27, 33, 34 and 36.—*J. Francis, D.L.S., 1904.*

(*North outline.*)—This township is covered with a growth of small poplar,
26. birch and underbrush of hazel and willow. There are many small lakes, ponds and hay marshes. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township consists generally of rolling land, the soil being a sandy loam with clay bottom. The eastern two-thirds is chiefly timber land, with

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

a very considerable area of water, caused by the numerous lakes and sloughs. The western third of the township is much better adapted to settlement, the land being open in places, with no timber and only a small proportion of scrub. On the whole, it may be stated that it is fairly adapted to settlement, the soil being good and water and timber easily accessible.—*Staunton and Jones, D.L.S., 1881.*

Roblin station on the Canadian Northern railway is in section 8 of this township, from which trails radiate in all directions. The soil is mostly first- and second-class, being a clay or black loam on a clay subsoil, and will be suitable for raising grain, of which some has been grown by the present settlers. The surface is rolling. The west half of the township is mostly open prairie, the east half has considerable scrub. There is no timber of any size, but there is plenty of young growing poplar in the eastern two tiers of sections. Hay sloughs are numerous, and many of the wet ones could easily be drained. All water is fresh, mostly in ponds, sloughs and lakes. There are no streams and no water-powers. There were some light frosts on and after August 20. Considerable young poplar, fit for firewood, may be procured in the east half of the township. There are no stone-quarries, but plenty of boulders for the requirements of settlers exist. No minerals were seen. Partridges, ducks, prairie-chickens and rabbits are plentiful. All the homesteads are taken up in this township.—*J. Francis, D.L.S., 1904.*

27. This township can be reached by a good trail from Roblin, a small village on the Canadian Northern railway, in township 26, range 28. The western half of this township is second-class. The land is gently rolling with a subsoil of black loam which is quite suitable for grain growing, and at present produces a dense growth of wild peas in the openings. During the years 1903 and 1904 all the good land available for homesteading has been squatted upon in this township. The western half of the township is badly broken by Shell river, the valley of which averages about a mile in width and 225 feet in depth. The river enters the township in section 36, and passes through sections 35, 26, 27, 22, 15, 10, 11, 14 and 13. Throughout the river valley in this township there is considerable prairie, but it is mostly third-class, being somewhat gravelly and stony. There are no hay meadows found in the valley. That portion of the township lying to the east of the river valley is quite rolling and inclined to be rough. The soil is of a much poorer class than the eastern half. Forty per cent of the township is covered with poplar, and willow scrub, while twenty per cent is covered by young poplar up to four and five inches in diameter and is distributed somewhat evenly through the township. Small sloughs are somewhat numerous, but there is only a moderate amount of hay to be secured. The water found is fresh and somewhat permanent. Shell river contains good water and has an average cross-section of 140 square feet and flows at a rate of five and one-half miles per hour. There are no water-powers along this river. From general indications the summer season is short but growth is rapid, being aided by the dense heavy dews, which are quite prevalent during July and August. Summer frosts may occur but do no damage. Fuels, other than poplar wood, are not available within the township. There are no stone-quarries nor minerals of economic value. There is no game other than a few ducks and prairie-chickens.—*R. H. Knight, D.L.S., 1904.*

28. This township can be reached by a good trail from Roblin, a small village located on the Canadian Northern railway in township 26, range 28. The western half of the township is second-class. The land is gently rolling, with a soil of black loam of good depth and quite suited for grain growing. At present the openings are producing a dense growth of hay and wild peas. The eastern half

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

of the township is badly broken by Shell river, the valley of which averages about a mile in width and 225 feet in depth. The river enters the township in section 34 and passes through sections 35, 26, 25, 24, 13, 12, and 1. Throughout the river valley in this township there is considerable prairie, but it is third-class, being somewhat gravelly and stony. The lands lying between the Shell river and the central meridian of the township are quite rolling and inclined to be rough. The soil is of a poorer quality than that of the western half of the township. A few quarters are second-class, but fully seventy per cent is third-class. About eighty per cent of this township is covered with poplar and willow scrub or poplar up to five inches in diameter. There are but few openings over twenty chains in width. A large quantity of hay may be produced, the best of which is in sections 7, 8, 9, 10, 15, 16, 17, 18, 19 and 20. Sections 2, 3, 4, and 5 and seventy-five per cent of sections 9, 10, 11, 14, 15, 22, 23, 30, 27 and 28 are covered with poplar up to five inches in diameter. There are numerous sloughs, the depth of water in which ranges generally from one to two feet, while a few are four feet and deeper. Very few are dry. The water is fresh and appears to be permanent. The water of Shell river is first-class. The river has an average cross-section of about 140 square feet, and flows at the rate of one and a half miles per hour. No water-powers are available. From general indications the summer seasons are short, but growth is rapid, being aided by the dense heavy dews which are quite prevalent during July and August. Summer frosts may occur, but do no damage. Poplar is the only fuel available. There are no stone-quarries nor minerals of economic value. Game is apparently scarce. A few ducks and prairie-chickens were observed in this township, these being the first seen during the season.—*R. H. Knight, D.L.S., 1904.*

This township can be reached by a good trail from Roblin, a small village
29. located on the Canadian Northern railway in township 26, range 28. This township is badly cut up by Shell river, the valley of which averages about a mile in width and 225 feet in depth. The river enters the township in section 36 and passes through sections 35, 26, 27, 22, 21, 28, 29, 20, 19, 18, 17, 8, 9, 5, 4, and 3. From the main valley of Shell river numerous small ravines run inland for a distance of a mile, and from the influence of the presence of this river valley with its ravines, fully seventy per cent of the township is rendered too rough for economical grain growing. There are numerous prairie openings in the valley which make excellent grazing ground, but none of them produce hay. That part of the township lying to the south, west, and north of Shell river is the most open part, but it is quite hilly and covered with considerable poplar and willow scrub, together with scattered poplar up to six inches in diameter. The soil is inclined to be of poor quality. That part of the township lying to the east of the river is generally level or gently rolling, but is covered with a thick growth of poplar from three to seven inches in diameter. There are numerous sloughs, swamps and small lakes, and as a whole that portion of the township is quite wet. Spruce and tamarack up to ten or twelve inches in diameter grow in most of the swamps. Sections 14, 15, and 16 contain considerable spruce, but this is not valuable, as the best has been taken off and only culls remain. The water in the lake in sections 1, 2, 11 and 12 is somewhat alkaline. At present it has no outlet, and the existing high-water mark is fully three feet lower than the bed of the old outlet. The inlet is irregular, being the overflow at high water from the lake in the north half of section 12 and the south half of section 13. All lakes, except the first of the above-mentioned, contain good fresh water, as does Shell river. At low water this river has an average cross-section of about 140 square feet and flows at the rate of one and a half miles per hour. There are no water-powers along this river. From general indications, the summer

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

season must be short, but the growth rapid. Light summer frosts occurred. Wood is the only fuel available. There are no stone-quarries nor minerals of economic value. Game appears to be scarce. Shell river contains fish that are common to all Manitoba rivers. The large lake in sections 1, 2, 11, and 12, until about four years ago, contained fish in abundance, but at present none are to be found.—*R. H. Knight, D.L.S., 1904.*

A good trail from Roblin, a small village on the Canadian Northern railway in township 26 range 28, runs to within a few miles of the township.

30. This township is suitable only for mixed farming, and is third-class, the tillable soil averaging a poor quality. The western half of the township is somewhat open, but is quite hilly and inclined to be gravelly, while the eastern part is covered by poplar, spruce and jackpine bush, and is badly broken by numerous swamps and muskegs, together with Shell river and its many adjacent ravines. The best timber is found in sections 24, 25, 36 and 31, and is principally spruce of good size and quality. In sections 9, 10, 15, 21 and 22 there is much swamp land which is timbered with spruce up to twelve or fourteen inches in diameter with some tamarack. All the timber of this township is included in the Hanbury timber limits, and the best timber is being cut. Shell river valley does not produce hay as would be expected, and but little grows elsewhere in the township. Fresh water is found in abundance in many small lakes and creeks. Shell river has an average cross-section of about 140 square feet and flows at a rate of one and a half miles per hour at low water. This river is very crooked and has numerous rapids. At a great expense a small water-power could be developed, but the apparent natural resources of the surrounding country do not warrant the development of such power. There were two light frosts during the month of July. The nights are always cold, and from general indications early frost might be expected. The only fuel available is poplar, spruce, and tamarack, of which there is abundance. Stone-quarries and minerals of economic value are not apparent. Deer and black bears are quite abundant, the bears at times becoming an annoyance about camp. Fish similar to those found in the rivers of Manitoba are plentiful in Shell river, also in the lakes in sections 9 and 10.—*R. H. Knight, D.L.S., 1904.*

A good trail from Roblin, a small village in township 26, range 28, and

31. located on the main line of the Canadian Northern railway, runs to within six or eight miles of the township. Along the western side of township 30, range 28, there are openings enough to get through without cutting a road. Township 31 is useful only to the lumberman. Where large timber does not exist, a dense growth of small poplar accompanied with windfall and hazel is always to be found. The township, being so extremely rough, is quite useless for any class of farming, even if it were cleared. Sections 7, 8, 16, 17, 18, 20, 21, 22, 27, 28 and 29 are rough beyond description. Spruce timber of second and third grade and ranging from one to three feet in diameter is found in sections 5, 6, 7 and 8; from one to two feet in diameter in sections 15, 16, 17, 20, 21, 22 and 28. The remainder of the sections throughout the township contain considerable spruce up to eighteen inches in diameter, but it is somewhat scattered and chiefly found in swamps and muskegs. The timber of this township is included in the Hanbury timber limit and is being cut. Small creeks or lakes containing good water are frequent, but hay is not to be found, not even in the valley of Shell river as might be expected. From general indications, the summer season is short. Frost remained in the ground until the middle of June, and summer frosts are frequent. Fuels, other than wood, are not apparent. There are no stone-quarries, neither are there minerals of economic value to be found. Moose are very plentiful.—*R. H. Knight, D.L.S., 1904.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28—*Concluded.*

(*North outline.*)—The western three miles of this line runs through large
32. green poplar and some spruce; here, as on all the meridians, pack-horses have to be used. The surface is very rough and hilly, and the soil is of good quality.—*E. W. Hubbell, D.L.S., 1897.*

(*Subdivision.*)—From Pretoria post office, situated in section 31, township 33, range 28, there is a good wagon trail to the town of Swan River. A branch of the Canadian Northern railway from Swan River via Pretoria is now under construction. From Pretoria southward through township 33 there is but a poorly constructed surveyor's trail through the bush. There is no prairie to be found in township 32, range 28, and very little scrub. Sections 25, 26, 35, 36, 28, 29, 32 and 33 contain the lightest bush and is the easiest portion to be cleared. The north half of the township is rough, rising towards the south about 300 feet (to almost the summit of Duck mountains). The northern slope is covered by poplar up to four inches in diameter with great quantities of dead spruce trees or windfall, which is in many places almost impassable. In the southwest portion of the township there is a great deal of spruce up to six inches in diameter, mostly scattered through the growth of young poplar. In sections 19, 20, 16, 17 and 18 there is a large quantity of spruce up to twenty-four inches in diameter, though somewhat scattered and broken by small swamps and muskegs. This timber is contained in a timber limit. Sections 14, 15, 22, 23 and 24 are composed of considerable swamp and muskeg lands, covered with small spruce and tamarack up to twelve or fourteen inches in diameter. The land, generally, is rolling and inclined to be rough or broken by spruce swamps. There is an abundance of good water, obtainable from numerous small streams throughout the township. There are few sloughs or hay marshes. The soil is good, and if once cleared would be easily worked and quite suitable for mixed farming. Frosts at the date of survey (May) were quite frequent. Small sloughs were covered by ice on May 22. The only fuel obtainable is wood. There are no water-powers, stone-quarries nor economic minerals. The only game found is moose and black bears; these are in abundance and quite tame.—*R. H. Knight, D.L.S., 1904.*

RANGE 29A.

The soil in this township is of excellent quality, except in the extreme south
27. end where sections 11, 12, 13 and 14 are broken by Boggy creek ravine. The greater portion of the land in this township was scrubby prairie. There was no timber worthy of mention. There would not be much more than would suffice for temporary fencing and one winter's supply of wood. There is scarcely any available hay. Only a small percentage of the water is alkaline and a permanent supply of good water may be had in abundance by going down from twenty to forty feet. There are no stone-quarries nor economic minerals.—*C. F. Aylsworth, D.L.S., 1903.*

The soil in this township is excellent, except in the north end where the
28. surface is somewhat damaged by large muskegs and sloughs. There is no timber worthy of mention. No stone-quarries nor economic minerals were seen. There is very little available hay.—*C. F. Aylsworth, D.L.S., 1903.*

This township is easily reached by a good trail from Roblin a small village on
29. the main line of the Canadian Northern railway in township 26, range 28.

This township is but one mile and a quarter wide. It is mostly covered with young poplar up to five inches in diameter or poplar and willow scrub. Sections 13 and 24 are the best sections for farming purposes. The land is gently rolling and the soil is mostly black loam with a clay subsoil. These sections have a few prairie openings. In sections 1 and 12 there is considerable wet land, large sloughs or muskegs,

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29A—*Continued.*

together with a thick growth of young poplar. There are also a few swamps with young tamarack and spruce. Sections 25 and 36 are inclined to be rough and are covered with young poplar up to four inches in diameter. The soil is poor, being generally a light sandy loam or gravel. The summer season is short, but growth is rapid, being aided by the dense heavy dews of July and August. Light summer frosts occur. Wood is the only fuel available. No stone-quarries nor minerals of economic value are found. Game is scarce, there being but few ducks and prairie-chickens.—*R. H. Knight, D.L.S., 1904.*

30. This township is easily reached by a good trail from Roblin, a small village in township 26, range 28. This township is but one and a quarter miles wide. It is quite rough throughout and covered by poplar bush and scrub. The soil is light and is not a grain producer. There are numerous small sloughs and marshes but no hay meadows. The only available fuel is poplar and spruce. Sections 35 and 36 contain considerable spruce bush, which is included in the Hanbury timber limit. No stone-quarries nor minerals of economic value are found. The summer season is short and light summer frosts occur. The only game of importance in this township is jumping deer and black bears.—*R. H. Knight, D.L.S., 1904.*

RANGE 29.

(South outline.)—The land along the southern boundary is an undulating prairie with occasional bluffs of poplar and scrub. The soil is sandy, and of second- and third-class quality. There is a muskeg in section 31.—*A. C. Webb, D.L.S., 1875.*

(East outline.)—Along the eastern boundary there are heavy poplar woods in places. The land is very stony in sections 12, 13, 24 and 25. Both the Qu'Appelle and Assiniboine rivers flow through this township.—*A. C. Webb, D.L.S., 1875.*

(Subdivision.)—The Qu'Appelle valley crosses this township. Its high banks are crowded with timber. The soil in the valley is very good; elsewhere it is merely coarse sand.—*W. and D. Beatty, D.L.S., 1880.*

18. *(North and east outlines.)*—Along the eastern boundary is a high rolling prairie with occasional bluffs of poplar and willow scrub. The soil is a rich loam of first-class quality. On the northern boundary the land is stony in places. The Assiniboine river flows through section 3.—*A. C. Webb, D.L.S., 1873.*

(Subdivision.)—This township is traversed by the Assiniboine river. The slopes of the valley of this river are well covered with poplar. The valley bottom has good soil, but the remainder of the township is inferior.—*W. and D. Beatty, D.L.S., 1880.*

19. *(East outline.)*—The country along this line is rolling, with bluffs of poplar and willow scrub. The soil is of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(South outline.)—This outline crosses a slightly rolling prairie, with bluffs of poplar and willow scrub. The Assiniboine river flows in a southerly direction through section 3. An extensive muskeg occupies parts of sections 5 and 6. The land is of second- and third-class quality.—*A. C. Webb, D.L.S., 1875.*

(Subdivision.)—The land in this township is undulating and gravelly. East of the Assiniboine the land is fair but broken by ravines. A few bluffs of poplar furnish the only timber found.—*J. J. McArthur, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*North outline.*)—The Assiniboine river flows southwards through section
20. 34. The country is a rolling prairie with scattered bluffs of poplar and with scrub. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—The land along this line is a rolling prairie with bluffs of poplar. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—West of Assiniboine river the land is not well suited for settlement, but is well wooded with poplar, birch and oak. On the east side the soil is good, but broken by ravines.—*J. J. McArthur, D.L.S., 1880.*

21. (*East outline.*)—The land along this line is of a similar character to that along the southern boundary.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is traversed by the Assiniboine river, Smith creek and a creek locally called Skunk creek; on these streams are several sites for water-powers. The land is somewhat broken by ravines, but generally is good. There is a good scattering of poplar of small size.—*R. W. Hermon, D.L.S., 1880.*

(*East outline.*)—Along the eastern boundary the country is a high rolling
22. prairie, with bluffs of poplar. The soil is a sandy loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*North outline.*)—Sections 35, 36 and part of 34 are very high rolling prairie with bluffs of poplar. There are a number of gravel ridges. The soil is a clay loam and is of second-class quality. Sections 32, 33 and part of 34 are in the valley of the Assiniboine river, where there is some heavy timber and rich bottom land.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—The Assiniboine river flows through the township and is joined by Thunder creek. The land is marshy in places and there are a few small lakes, but where the soil is dry it is suited to agriculture. There is a belt of good timber.—*R. W. Hermon, D.L.S., 1880.*

(*East and south outlines.*)—The southern and eastern boundaries are much
23. broken by the valley of the Assiniboine river. The low lands in the valley of the river are annually flooded in the spring of the year. There are also many marshes and small muskegs. The slopes of the valley are timbered with poplar from two to fourteen inches in diameter. The table land is a rolling prairie, with poplar bluffs and willow scrub. The soil is of poor quality, being stony and gravelly.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The central and southern portions of this township are comparatively dry and well watered by two creeks. These creeks both have excellent mill sites with sufficient water-power. The fall is estimated at about 150 feet in the mile on both creeks and the current is nearly three miles an hour. The land is somewhat wet, but supports a luxuriant growth of hay, and is a black loam.—*F. W. Armstrong, D.L.S., 1881.*

(*North and east outlines.*)—The Assiniboine river flows in a southerly
24. direction through the east portion of the township. Its valley is about a mile wide and 300 feet below the level of the surrounding country; here, there are numerous small hay marshes, willow swamps, and ponds. The plateau is an open prairie on which there are small bluffs of poplar. The soil is a sandy loam of good quality.—*J. McLatchie, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*Subdivision.*)—The township is slightly rolling and broken in the east by the Assiniboine river and its tributaries. The soil is rich, and there is sufficient good water. Hay grows plentifully, and there are several small clumps of willow and poplar scattered throughout.—*F. W. Armstrong, D.L.S., 1881.*

(*East outline.*)—The surface of this township is an undulating and scrubby
25. prairie with a number of bluffs of poplar, small lakes, ponds and hay marshes. The soil is a sandy loam with a clay subsoil of good quality. The Assiniboine river flows in a southerly direction through this township at the bottom of a deep and wide valley. There is some maple and elm timber along the slopes of the valley.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The Assiniboine river runs through this township. There is a luxuriant growth of timber, very little, however, being sufficiently large for manufacturing purposes. The soil is sandy.—*M. Deane, D.L.S., 1881.*

This township is easily reached by a good trail from Roblin, a village on the main line of the Canadian Northern railway, in township 26, range 28, or by a good trail from Russell, a town on the Canadian Pacific railway about thirty miles southward. Assiniboine river, running through sections 32, 29, 20, 17, 8, 5, 4, 3 and 2, makes these sections useless for grain growing. On the other hand some portions of the river valley are excellent hay producers. The best portions are the part of section 3 lying to the south of the river and in the valley, the portions of sections 4 and 5 lying to the north of the river, the portion of the north half of section 17 lying in the river valley and the east half of section 20, together with the portion of the southeast quarter of section 29, which lies to the east of the river. The west half of sections 31 and 7, together with sections 30 and 6, are about the only portions of apparently good land contained in the work which consisted of the western two tiers of sections and sections 2, 31, 4 and 9. Poplar bush, ranging from five to ten inches in diameter is found as follows: upon the sidehill contained in the east half of section 2, on the sidehill of those portions of sections 4 and 5 lying to the south of the Assiniboine river and on the sidehill to the west of the river throughout the township, excepting that portion of the sidehill in the southwest quarter at section 20 and the northwest quarter of section 29. The ravines in sections 18 and 19 are also covered with large poplar trees. The climate is considered equally as good as that of most settled portions of Manitoba. If summer frosts occur they are light and do no damage. The only available fuel is poplar wood, of which there is a lasting supply if protected from prairie fires. Minerals of economic value and stone-quarries are not found. The only game in the township is prairie-chickens and deer, both of which are scarce.—*R. H. Knight, D.L.S., 1904.*

The country hereabout is thickly covered with scrub and brush and a great deal of sapling poplar with an occasional birch or Manitoba maple. Roblin, a village of about 450 population on the Canadian Northern railway, is in township 26, range 28. The country is rolling or even hilly in some places, and although there are a great many small sloughs, marsh hay was not very much in evidence. The poplar is used locally almost altogether as a fuel. There are no stone-quarries, minerals nor water-powers. No game of any kind was noticed. The lakes in section 25 have well defined, unvarying, wooded banks, in some cases twenty feet high, and are situated in a rather hilly region. The water is sufficiently fresh for stock and no alkali was noted. In depth they must be well over ten feet in some places.—*R. C. Purser, D.L.S., 1911.*

(*North and east outlines.*)—This country is timbered with small poplar alternating with scrubby prairie. There are a number of small ponds and hay marshes throughout. Big Boggy creek flows in a southerly direction through section 35. The soil is a clay loam of first-class quality.—*J. McLatchie, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*Subdivision.*)—This township is generally well fitted for settlement, but much broken in the northern and western parts by the valleys of Big Boggy creek and the Assiniboine river. Over one-third of the surface is gently rolling. The water in the creek is slightly alkaline, containing some mineral substance also. The surface is heavily wooded, principally with poplar and balm of Gilead in the valleys of the river and creek, with some birch, maple, oak, spruce and pine; there is considerable dry wood and windfall. There are some large-sized ponds or lakes. The soil is first-, second-, and third-class, being a deep loam in the valleys and stony and gravelly on the side hills, with a good deal of muskeg in sections 23, 25, and 26.—*D. C. O'Keefe, D.L.S., 1881.*

This township is easily reached from the village of Roblin by a good graded road which enters the township along the north boundary of section 1. Roblin is but six or eight miles from the centre of this township, and is located on the main line of the Canadian Northern railway. The surface is badly broken by the Assiniboine river and Big Boggy creek, the valleys of which are from one to one and a half miles in width, and from 250 to 300 feet deep. Fully one-third of the township is rendered useless for farming by these valleys. About one-sixth of the sections are occupied by recent settlers, and a few sections are patented and unoccupied. The best quantity and quality of land is that portion lying south of the creek and east of the Assiniboine river. The soil ranges from a black loam to a rich clay loam. The lands lying to the north of Big Boggy creek are second-class, but are covered with considerable scrub and large poplar. Throughout the township the land is generally level or gently undulating. The southeast quarter of the township is mostly covered with poplar and willow scrub, with poplar up to three inches in diameter. Sections 8 and 17 are somewhat gravelly and mostly prairie. Sections 21, 28, 29, and 5 are covered with large poplar from six to ten inches in diameter. The only hay found is in the valley of the Assiniboine river, the most of which is in sections 6, 18, and 19. The Assiniboine, during spring floods, rises some ten or twelve feet, and thereby floods the whole valley at many points. Water is apparently scarce, except in the above-mentioned streams. There are not more than a dozen sloughs throughout the township. Bodies of water which were considered small lakes a few years ago, are no longer such, but have dried up considerably and may now be called sloughs. The settlers obtain good water from wells at a depth of about twenty-five feet in many places. The climate is considered equally as good as that in any part of Manitoba. If summer frosts occur, they are very light and do no damage. There are no water-powers. The only fuel available is poplar wood. No stone-quarries nor minerals of economic value were seen. A few prairie-chickens were the only game seen.—*R. H. Knight, D.L.S., 1904.*

(*East outline.*)—The country along this line is timbered with small poplar, with prairie openings which are nearly all covered with scrub. The soil is a rich black loam of first- and second-class quality. Big Boggy creek flows in a southeasterly direction across the northeastern corner of section 1. The valley of this creek is about three-quarters of a mile wide and 150 feet deep.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—Big Boggy creek passes through this township, affording many good sites for water-power. The country is well suited for stock-raising. There is an abundance of small timber with a great deal of scrub.—*R. W. Hermon, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*North and east outlines.*)—The surface is nearly all timbered with small
28. poplar, spruce and tamarack, much of which, however, has been killed by fire. There are a number of prairie openings on which there is a great deal of scrub. There are also many small lakes, ponds and hay meadows. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township is traversed by Big Boggy creek and its tributaries, affording many good sites for water-power. It is admirably adapted to stock-raising. There is an abundance of small timber. The prairie is generally covered with small scrub.—*R. W. Hermon, D.L.S., 1880.*

From section 27, township 29, range 30, we followed the Shell River road
29. up the valley of Little Boggy creek as far as the north boundary of section 26. Here we bridged the creek and cut a road easterly as far as the southwest corner of section 32, township 29, range 29, where we made our first camp. We had considerable difficulty in getting up the south bank of the valley of Little Boggy creek with the outfit, as the valley is very deep here and the banks very steep. Otherwise the road is in fair condition. From this camp we cut a road southeasterly across sections 29 and 28, southerly through section 21 and easterly through section 15, making our second camp in the northeast quarter of section 15. The soil for the most part is a clay loam from four to twelve inches in depth with a clay subsoil. It is very rich in quality and is suitable for agricultural purposes. The surface in the northern part of the township is very uneven and much broken by sloughs and muskegs. It is covered with poplar and willow scrub and windfall. In the southern half of the township the surface is gently rolling and is about half prairie, the remaining part being covered with scattered poplar from six to twelve inches in diameter with poplar and willow scrub. There are a few small spruce bluffs in the western tier of sections with spruce from ten to fifteen inches in diameter but these are not extensive enough to be valuable as a timber reserve, although a number of fine building logs could be secured here. Many large hay sloughs exist in the two southern rows of sections. The hay is of good quality and would yield about 100 tons per section. There are many lakes in the township and the water in them is fresh, but the streams are small and mostly dry up during the summer season. There is no water-power available in the township. The land is not liable to be flooded except in the hay sloughs. These are flooded to a depth of about two feet in the spring, but dry up during the summer. The climate is very changeable and summer frosts are very frequent. Wood for fuel may be had in any part of the township, but no coal nor lignite exists. No rock, stone-quarries nor minerals of economic value were seen. A few elks, moose and deer are to be found and many partridges, prairie-chickens and rabbits.—*C. Harvey, D.L.S., 1904.*

To get to township 30 we followed our old road back as far as section 32,
30. township 29, range 29, and from there we cut a road northerly into section 9, township 30, range 29, where we camped in the valley of Little Boggy creek. From this camp we surveyed the south half of the township and then made a road north into section 28, from which place we finished the township. The road, with the exception of a few steep hills, is very good. The surface of the township is very uneven and covered with poplar scrub and windfall. The soil in the hollows is a clay loam from six to twelve inches deep with a clay subsoil. On the ridges the surface loam has been worn off by the action of the weather and a heavy bluish clay is left. Sections 13, 24, 25 and 36 and parts of sections 26 and 35 have a growth of spruce from ten to twenty inches in diameter which would make a timber limit large enough to keep a portable sawmill going for several years. There is no hay in the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 26—*Concluded.*

might be cut. Valley river, which flows southerly through sections 12 and 13, is about fifty feet wide, from two to three feet deep, and flows about four miles an hour. The water in it is very fresh and good. Short creek, which flows easterly through sections 7, 8, 9, and 10, is about six feet wide and two feet deep. The valley through which it flows is low and flat and covered in many places by muskeg and hay sloughs. The land, except in Short creek valley, is not liable to be flooded. No water-power is available in the township. The climate is dry and liable to summer frosts. Spruce and poplar for fuel can be had in any part of the township, but no coal nor lignite exists. No stone-quarries nor minerals of economic value exist in the township. Partridges, prairie-chickens and rabbits are plentiful, and a few deer are found in the northern part of the township.—*C. Harvey, D.L.S., 1904.*

RANGE 27.

(*East and south outlines.*)—The country along these lines is an undulating
17. prairie, with occasional bluffs of poplar and clumps of willow. The soil is a good sandy loam of second-class quality. Birdtail creek flows through a deep valley in sections 1 and 2. There are many large boulders strewn on the prairie flats in the valley.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie, traversed by several small creeks, and dotted with small patches of scrub willow and occasional clumps of poplar which is sufficiently large for fencing purposes. The soil is a friable loam from one to two feet deep, with clay subsoil.—*F. W. Armstrong, D.L.S., 1880.*

(*North and east outlines.*)—These lines traverse an undulating prairie with
18. scattered bluffs of poplar and clumps of willow brush. There are a number of small hay swamps throughout. The soil is a good sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie, rather broken by sloughs and dotted over with clumps of poplar and willow. Two or three creeks traverse the township. The soil is a rich black loam.—*F. W. Armstrong, D.L.S., 1881.*

(*South outline.*)—The country along this line is an undulating prairie,
19. with a few poplar bluffs with willow scrub, and occasional small hay swamps. The soil is a first-class sandy loam.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—This line traverses a rolling prairie, with scattered clumps of poplar, and a number of small hay swamps. The soil is of second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—The southeastern portion of this township is much broken by lakes; the remainder is well adapted to agricultural purposes. The soil is a rich black loam, and there is sufficient poplar for settlers' requirements.—*C. A. Lett, D.L.S., 1880.*

(*North outline.*)—This line runs over a rolling prairie, with occasional
20. bluffs of poplar. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—The country along this line is rolling prairie, with scattered clumps of poplar and willow. The soil is of second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is undulating prairie with a rich soil. Good water is supplied by a creek which traverses the township.—*C. A. Lett, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 27.—*Continued.*

- 21.** (*East outline.*)—The country along this line is a rolling prairie with bluffs of poplar and willow. There are a number of small hay meadows. The soil is of first- and second-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with bluffs of poplar and balm of Gilead. Two creeks cross the township. The soil is excellent.—*J. H. Reiffenstein, D.L.S., 1880.*

- 22.** (*North outline.*)—This outline traverses rolling prairie with heavy poplar woods, and hay swamps in sections 34, 35 and 36. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—The surface along this line is undulating, and covered with poplar woods and numerous hay marshes. There is some prairie land in section 1. The soil is of third-class quality.—*G. M. Kingston, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with clumps of poplar, balm of Gilead and birch. The soil throughout is first-class. The township is well watered by three small lakes and numerous hay marshes.—*J. H. Reiffenstein, D.L.S., 1880.*

- 23.** (*East and south outlines.*)—The land traversed by these lines is generally timbered with poplar and some willow and poplar scrub. There are many stretches of open, rolling prairie land, and a number of small lakes and ponds with good water. The soil is a sandy loam of first-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township is alternately woods and prairie with a very good soil throughout. A road runs through the township.—*W. and D. Beatty, D.L.S., 1880.*

- 24.** (*North and east outlines.*)—Along the eastern and northern boundaries the land is rolling and timbered with poplar and white birch, with a thick undergrowth of hazel and willow. There are a number of small lakes, ponds and hay marshes. The soil is a sandy loam with a clay subsoil; it is of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The surface of this township has an excellent soil and is well timbered throughout. There are a few small lakes and muskegs in the woods. McKay's trail crosses the township.—*W. and D. Beatty, D.L.S., 1880.*

- 25.** (*East outline.*)—Along this line there are a great number of small lakes and marshes scattered throughout. The land is timbered with poplar, white birch, maple and an undergrowth of hazel, willow and cherry. The soil is a sandy clay loam of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—With the exception of portions of sections 32 and 33, this township is nearly all third-class land, and of little value for agricultural purposes. About two-thirds of the township is covered with heavy poplar, scattered birch and willows, with heavy windfalls in places. Shell river, in a valley 250 feet deep, flows through the northwestern part of the township. The average width of the valley is about one mile. The average width of the river is about ninety links, and its depth from three to eight feet, with a current of four miles per hour; it would form a very convenient means of floating down timber. All the water in the township is fresh and good.—*Staunton and Jones, D.L.S., 1881.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 27.—*Continued.*

(*North and east outlines.*)—The land is rolling, and generally timbered with poplar, birch and spruce, with a great deal of scrub, consisting of willow, hazel and maple. A considerable part of the timber is fire-killed, and young maple is now growing up. There are numerous small lakes and ponds throughout the township. Shell river flows in a southerly direction through section 31. The soil is a rich, black, sandy loam of first-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The greater portion of this township is unfit for agricultural purposes, although fairly suited for grazing. A few sections in the valley of Shell river may be available for settlement, and rank second-class. Shell river, in a deep valley a mile in width, flows through the western portion of the township. There is a great deal of poplar, with some oak, birch, spruce, tamarack, willow scrub and burnt and fallen timber. The township, as a rule, is very rough and broken.—*Staunton and Jones, D.L.S., 1881.*

There is a siding on the Canadian Northern railway in section 32, township 25, range 27; from there trails lead northerly and northeasterly into this township, passing up through Shell River valley to the north boundary and then, parallel to the railway, to the east boundary. The soil is sandy loam in the southwest corner and clay loam in the remainder of the township; there are some stony hills in the northeast portion. The soil is suitable for mixed farming. The surface is heavy rolling prairie in the southerly half and scrubby in the north, with old stumps and windfall. There are fringes of spruce, tamarack and poplar, around some of the ponds and lakes, which are large enough for building logs and fence posts. Most of the sloughs are too wet for hay, but after a number of dry seasons there would be a considerable quantity available. Several lakes have good water. Shell river flows through the westerly half of the township and Takwa creek through the easterly. Shell river, averaging 125 links wide and two feet deep, gives a sufficient and permanent supply all the year round for all purposes. No water-power can be developed along this river in this township. The season was moderately dry with some light frosts on and after August 20. Large quantities of old stumps and windfall for fuel may be procured in the north half of the township; the young poplar, in a few years, will supply sufficient for the needs of the settlers. No rock-in-place was seen, but plenty of limestone and granite boulders exist in the northern portion of the township. Partridges and rabbits are very plentiful. Only two settlers were living in the township, but many of the homesteads are taken up.—*J. Francis, D.L.S., 1904.*

From township 28, range 27, we moved back over our old trail as far as section 16, where we found a road running southeasterly into township 27, range 27. This road goes around the east side of Clarke lake and then runs in a southwesterly direction as far as Shell river, where it joins the Shell River road. The soil in this township is light and of poor quality. The surface is very rolling and uneven and covered with a heavy growth of poplar and willow scrub, with windfall and burnt timber in some places. Some spruce and black poplar, fifteen to twenty inches in diameter, were found in the southeastern part of the township, but the best timber has been all logged out already. Many lakes and hay sloughs are to be found in all parts of the township. About 600 tons of hay are available. A rancher who lives in section 26, cuts all the available hay for wintering his cattle. A few small streams flow through the township and Shell river cuts across the southwest corner of it. The water in the lakes is fresh. The land is not liable to be flooded at any time of the year. No water-power is available in the township. The climate is dry

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 27—*Concluded.*

and subject to summer frosts. Spruce and poplar for fuel can be had in any part of the township but no coal nor lignite exists. No stone-quarries nor minerals of economic value are found in the township. Moose, black bears, partridges, prairie-chickens, and rabbits are plentiful.—*C. Harvey, D.L.S., 1904.*

To get to this township from township 31, range 29, we had to come back over
28. our old road as far as section 15, township, 29, range 29, where we found a good road going in a southeasterly direction as far as Shell river, where there is a good ford. On the east side of the river there are old timber roads running in all directions, and we had no difficulty in finding one leading into the centre of this township. The soil is light and of poor quality. The surface is very rolling and uneven and covered with a heavy growth of poplar and willow scrub, with windfall and burnt timber in some places. Some spruce and black poplar from fifteen to twenty-four inches in diameter are found in sections 24, 25, 26, 35 and 36. These would supply building logs for settlers, or a limited quantity of lumber could be got from them, but the best of the timber has already been removed. A few spruce from six to ten inches in diameter are also to be found in the swamps in different parts of the township. There is no hay of any account. A few streams of very good water flow through the township, and many lakes are to be found in all parts of it. The water in the lake is fresh and pike and mullet are plentiful in Angling lake. No land is liable to be flooded. No water-power is available. The climate is dry and subject to summer frosts. Wood for fuel can be had in any part of the township, but no coal or lignite seams were noted. No stone-quarries nor minerals of economic value exist in the township. Moose, black bears, partridges, and rabbits are the only game found.—*C. Harvey, D.L.S., 1904.*

(*North outline.*)—This line runs through very rough, hilly and broken
32. country, crossing numerous coulées and ravines varying in depth from sixty to two hundred feet, and is thickly timbered with spruce and poplar varying in size from four to forty inches in diameter. Recent fires have destroyed most of this immense timber, which has been blown down and lies piled in tangled heaps, making the travelling most difficult and tedious even with pack horses. The line intersects numerous streams, the water of which is clear and very hard. The soil may be classified as second- and third-class; the surface soil of black loam varies in depth from two to four inches with a subsoil of gumbo or gravelly clay. Many of the higher ridges are covered with boulders and gravel.—*E. W. Hubbell, D.L.S., 1898.*

RANGE 28.

(*South outline.*)—The country along this line is an undulating prairie with
17. occasional bluffs of poplar and clumps of willow brush. The soil is a sandy loam of second-class quality. The Assiniboine river flows through a valley about 200 feet deep, in section 4.—*J. McLatchie, D.L.S., 1873.*

(*Subdivision.*)—This township is rolling prairie. The soil is a dark, friable loam, with clay subsoil. The township is watered by a large creek and Assiniboine river. There is a fair quantity of timber.—*E. W. Armstrong, D.L.S., 1880.*

(*North outline.*)—The country along this line is an undulating prairie,
18. with occasional bluffs of poplar and willow. The soil is a good sandy loam of second-class quality. Section 31 is much broken by the deep valley of a creek.—*J. McLatchie, D.L.S., 1873.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

(*Subdivision.*)—This township is rolling prairie, broken towards the northwest by deep ravines and gullies. The soil is very rich and deep. It is well watered by what is locally known as Snake river and two large creeks. There is a fair proportion of timber.—*F. W. Armstrong, D.L.S., 1880.*

(*South outline.*)—Along this line the country is a high rolling prairie, with
19. bluffs of poplar and scrub. In places there is some small oak, and section 4 is heavily timbered with poplar. This section is broken by ridges and ravines; Silver creek, a stream of clear cold water about two feet in depth, with a swift current, flows through it. The soil is of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie with a black loam soil. It contains sufficient poplar bush for the requirements of settlers.—*C. A. Lett, D.L.S., 1880.*

(*North outline.*)—This outline traverses a rolling prairie which sustains a
20. growth of scattered willow bushes and bluffs of poplar. There are many small hay marshes. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is well adapted to settlement, as the soil is a deep black loam of first-class quality and there is sufficient poplar for the requirements of settlers.—*C. A. Lett, D.L.S., 1880.*

(*South outline.*)—The country along this line is a rolling prairie, with scattered bluffs of poplar with scrub, and a number of small hay swamps. The
21. soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is a rolling prairie, dotted with bluffs of poplar, and broken on the west by a deep gully, through which a large creek flows. There are a number of small lakes; the water in three of them is salty, but in the others it is fresh. The timber is useful only for fence rails. The soil throughout is very good.—*J. H. Reiffenstein, D.L.S., 1880.*

(*North outline.*)—The country traversed by this line is a rolling prairie,
22. with occasional bluffs of poplar. Shell river flows through a deep valley 200 to 300 feet below the prairie level in section 32. In the valley there is heavy poplar with dense scrub. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—This township is rolling prairie, dotted with bluffs of poplar, some of which is large enough for building purposes. A creek traverses the southern half. The soil throughout is first-class.—*J. H. Reiffenstein, D.L.S., 1880.*

The regular centre meridian road allowance through this township leads into the village and station of Russell, Manitoba. It is more or less improved and graded by the municipal corporation of Shell River. The soil is mostly a black loam, resting on a clay subsoil and is admirably adapted to grain raising. The surface is gently rolling, mostly prairie, interspersed with bluffs of poplar and willow scrub, presenting a beautiful park-like country. No timber of any value now remains, but if no fires are allowed to run, in a few years some of the bluffs will supply fuel. No hay sloughs of any extent exist. All the water is fresh and good. Shell river touches the township on the north boundary of section 32. A small creek crosses the township from east to west, but will dry up during the summer. There is no land liable

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

to flooding. No water-powers exist. So far this season the regular Manitoba weather prevailed. There is, at present, very little fuel in the township, but wood may be procured north and northwesterly in the adjoining township. No coal nor other minerals have yet been found. Some gravel and boulder stones may be had in section 31. Ducks and prairie-chickens are plentiful. The township is fairly well settled and raises large quantities of grain and stock.—*J. Francis, D.L.S., 1904.*

(*South outline.*)—Along this line the surface is rolling prairie, with clumps
23. of willow scrub, occasional bluffs of poplar and a number of small lakes and ponds. In sections 1 and 2 the soil is a sandy loam of first-class quality. The remaining four sections are of poor quality. Shell river crosses this boundary; it flows through a deep valley which is 250 feet below the level of the surrounding country and is nearly a mile wide; the slopes are timbered with poplar. The river is one and one-half chains wide, five feet deep and has a swift current, gravel bottom and good water.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The Shell river flows through the township. Its banks are covered with poplar. The rest of the land is alternate prairie and scrub with a very good soil.—*W. and D. Beatty, D.L.S., 1880.*

The main road from Russell to Tumbell and Goose lakes, passes northerly through this township; it is more or less improved by the local authorities, thus giving easy access to any part of the township. The soil is, in general, first-class, except along the edges of the valleys, where it is inclined to be stony. The surface is gently rolling, except where broken by valleys of Bear creek, Shell and Assiniboine rivers, these latter making the land hilly. Some poplar trees fit for building logs may be got along the western side of Shell River valley, especially adjoining the central meridian of the township. No hay sloughs of any size are to be found. All water is fresh and good. Shell river traverses the township from north to south, dividing it nearly equally. Bear creek coming from the east along or near the north boundaries of section 1 and 2, joins the former near the south boundary of section 10. There is considerable wood fit for fuel, growing along the sides of the valleys and lateral ravines, that are to be found in the township. These places are not fit for much else being very sloping. The current of Shell river is very rapid in places, affording plenty of head for water-power. No coal nor other minerals have yet been found. Plenty of granite and limestone boulders may be got along the valley of the river. A few deer and bears were seen, but no other game. A good many settlers are living in this township. East of Shell river nearly all the monuments have been destroyed by the fires which have taken place since it was first surveyed.—*J. Francis, D.L.S., 1904.*

(*North outline.*)—This outline traverses rolling prairie, with numerous
24. bluffs of small poplar and burnt spruce. The soil is a sandy loam of good quality. Shell river, the water in which is muddy and about six feet deep, flows in a southerly direction through the township with a swift current. The bed of the river is about 150 feet below the level of the surrounding country.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—Shell river flows through the township, the current being very strong. The land is alternate prairie and scrub. The soil is generally first-class.—*W. and D. Beatty, D.L.S., 1880.*

A good trail, improved along the road allowance in places, leading from Russell on the Canadian Pacific railway to Roblin, on the Canadian Northern railway, gives

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

easy access to this township. The soil is mostly a black or clay loam on a clay sub-soil and is suitable for the raising of grain or mixed farming. The surface is rolling, except along the valleys of Assiniboine and Shell rivers, where it is more or less heavily sloping. This township is largely prairie and scrub equally intermixed. There is no timber of any value. There is very little hay, but all the sloughs and ponds are liable to dry up. Shell river gives a permanent supply of fresh water at all times. This river, averaging one chain in width and two feet in depth, with a current of three miles per hour, gives a volume and strength of current sufficient for the running of sawlogs in the early summer season, for which it has been utilized more or less for some years. The land along this river is subject to flooding only at extremely high water, and then only for a short time. There were no water-powers observed. The usual Manitoba summer prevails, inclined to be slightly drier and cooler than ordinary. There are no summer frosts. Plenty of young growing poplar scrub in bluffs more or less in every section will, in the future, give plenty of fuel if not too much fire-killed. No coal, stone-quarries nor minerals exist, but there are plenty of boulders along the valleys of Shell and Assiniboine rivers. There was not much game seen while surveying this township. This township is largely taken up and the western half is well settled.—*J. Francis, D.L.S., 1904.*

25. A fair proportion of the land in this township is first- and second-class, and well adapted to settlement, being partly open prairie with a plentiful supply of poplar, suitable for fuel and fencing. Shell river flows through the township in a southerly direction. The valley of this stream has a depth of 250 feet, with an average width of one mile. The depth of the river varies from three to eight feet, with a current of four miles an hour. A considerable area of the surface is very much broken by lakes, sloughs, ravines and the valley of Shell river.—*Staunton and Jones, D.L.S., 1881.*

Trails from Roblin, a station on the Canadian Northern railway, lead south and southeasterly into this township, giving easy access to any part of it. The soil is mostly a clay loam, suitable either for grain growing or mixed farming. The surface is rolling, except along the valley of Shell river, where it is broken by steep slopes. Scrub alternates with open places or prairie all over the township. There is no timber of any kind. There are a few sloughs. Hay is not very plentiful. Shell river and about half a dozen lakes in the northern part of the township contain good fresh water and give a plentiful supply at all times. Shell river, about one chain wide and with a depth varying according to the season, has a current of from three to four miles per hour. The flats along its banks are not subject to flooding except occasionally in the spring after a heavy winter's snowfall. There are no waterfalls on the river but by damming it, small amounts of power might be developed. Plenty of young, green scrub, if not fire-killed, will give considerable fuel in a few years. No coal, stone-quarries nor minerals were found, but there are plenty of boulders along the valley of Shell river. Ducks, prairie-chickens, partridges and rabbits are plentiful. The Canadian Northern railway passes through sections 25, 26, 27, 33, 34 and 36.—*J. Francis, D.L.S., 1904.*

26. (*North outline.*)—This township is covered with a growth of small poplar, birch and underbrush of hazel and willow. There are many small lakes, ponds and hay marshes. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township consists generally of rolling land, the soil being a sandy loam with clay bottom. The eastern two-thirds is chiefly timber land, with

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

a very considerable area of water, caused by the numerous lakes and sloughs. The western third of the township is much better adapted to settlement, the land being open in places, with no timber and only a small proportion of scrub. On the whole, it may be stated that it is fairly adapted to settlement, the soil being good and water and timber easily accessible.—*Staunton and Jones, D.L.S., 1881.*

Roblin station on the Canadian Northern railway is in section 8 of this township, from which trails radiate in all directions. The soil is mostly first- and second-class, being a clay or black loam on a clay subsoil, and will be suitable for raising grain, of which some has been grown by the present settlers. The surface is rolling. The west half of the township is mostly open prairie, the east half has considerable scrub. There is no timber of any size, but there is plenty of young growing poplar in the eastern two tiers of sections. Hay sloughs are numerous, and many of the wet ones could easily be drained. All water is fresh, mostly in ponds, sloughs and lakes. There are no streams and no water-powers. There were some light frosts on and after August 20. Considerable young poplar, fit for firewood, may be procured in the east half of the township. There are no stone-quarries, but plenty of boulders for the requirements of settlers exist. No minerals were seen. Partridges, ducks, prairie-chickens and rabbits are plentiful. All the homesteads are taken up in this township.—*J. Francis, D.L.S., 1904.*

27. This township can be reached by a good trail from Roblin, a small village on the Canadian Northern railway, in township 26, range 28. The western half of this township is second-class. The land is gently rolling with a subsoil of black loam which is quite suitable for grain growing, and at present produces a dense growth of wild peas in the openings. During the years 1903 and 1904 all the good land available for homesteading has been squatted upon in this township. The western half of the township is badly broken by Shell river, the valley of which averages about a mile in width and 225 feet in depth. The river enters the township in section 36, and passes through sections 35, 26, 27, 22, 15, 10, 11, 14 and 13. Throughout the river valley in this township there is considerable prairie, but it is mostly third-class, being somewhat gravelly and stony. There are no hay meadows found in the valley. That portion of the township lying to the east of the river valley is quite rolling and inclined to be rough. The soil is of a much poorer class than the eastern half. Forty per cent of the township is covered with poplar, and willow scrub, while twenty per cent is covered by young poplar up to four and five inches in diameter and is distributed somewhat evenly through the township. Small sloughs are somewhat numerous, but there is only a moderate amount of hay to be secured. The water found is fresh and somewhat permanent. Shell river contains good water and has an average cross-section of 140 square feet and flows at a rate of five and one-half miles per hour. There are no water-powers along this river. From general indications the summer season is short but growth is rapid, being aided by the dense heavy dews, which are quite prevalent during July and August. Summer frosts may occur but do no damage. Fuels, other than poplar wood, are not available within the township. There are no stone-quarries nor minerals of economic value. There is no game other than a few ducks and prairie-chickens.—*R. H. Knight, D.L.S., 1904.*

28. This township can be reached by a good trail from Roblin, a small village located on the Canadian Northern railway in township 26, range 28. The western half of the township is second-class. The land is gently rolling, with a soil of black loam of good depth and quite suited for grain growing. At present the openings are producing a dense growth of hay and wild peas. The eastern half

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

of the township is badly broken by Shell river, the valley of which averages about a mile in width and 225 feet in depth. The river enters the township in section 34 and passes through sections 35, 26, 25, 24, 13, 12, and 1. Throughout the river valley in this township there is considerable prairie, but it is third-class, being somewhat gravelly and stony. The lands lying between the Shell river and the central meridian of the township are quite rolling and inclined to be rough. The soil is of a poorer quality than that of the western half of the township. A few quarters are second-class, but fully seventy per cent is third-class. About eighty per cent of this township is covered with poplar and willow scrub or poplar up to five inches in diameter. There are but few openings over twenty chains in width. A large quantity of hay may be produced, the best of which is in sections 7, 8, 9, 10, 15, 16, 17, 18, 19 and 20. Sections 2, 3, 4, and 5 and seventy-five per cent of sections 9, 10, 11, 14, 15, 22, 23, 30, 27 and 28 are covered with poplar up to five inches in diameter. There are numerous sloughs, the depth of water in which ranges generally from one to two feet, while a few are four feet and deeper. Very few are dry. The water is fresh and appears to be permanent. The water of Shell river is first-class. The river has an average cross-section of about 140 square feet, and flows at the rate of one and a half miles per hour. No water-powers are available. From general indications the summer seasons are short, but growth is rapid, being aided by the dense heavy dews which are quite prevalent during July and August. Summer frosts may occur, but do no damage. Poplar is the only fuel available. There are no stone-quarries nor minerals of economic value. Game is apparently scarce. A few ducks and prairie-chickens were observed in this township, these being the first seen during the season.—*R. H. Knight, D.L.S., 1904.*

This township can be reached by a good trail from Roblin, a small village
29. located on the Canadian Northern railway in township 26, range 28. This township is badly cut up by Shell river, the valley of which averages about a mile in width and 225 feet in depth. The river enters the township in section 36 and passes through sections 35, 26, 27, 22, 21, 28, 29, 20, 19, 18, 17, 8, 9, 5, 4, and 3. From the main valley of Shell river numerous small ravines run inland for a distance of a mile, and from the influence of the presence of this river valley with its ravines, fully seventy per cent of the township is rendered too rough for economical grain growing. There are numerous prairie openings in the valley which make excellent grazing ground, but none of them produce hay. That part of the township lying to the south, west, and north of Shell river is the most open part, but it is quite hilly and covered with considerable poplar and willow scrub, together with scattered poplar up to six inches in diameter. The soil is inclined to be of poor quality. That part of the township lying to the east of the river is generally level or gently rolling, but is covered with a thick growth of poplar from three to seven inches in diameter. There are numerous sloughs, swamps and small lakes, and as a whole that portion of the township is quite wet. Spruce and tamarack up to ten or twelve inches in diameter grow in most of the swamps. Sections 14, 15, and 16 contain considerable spruce, but this is not valuable, as the best has been taken off and only culls remain. The water in the lake in sections 1, 2, 11 and 12 is somewhat alkaline. At present it has no outlet, and the existing high-water mark is fully three feet lower than the bed of the old outlet. The inlet is irregular, being the overflow at high water from the lake in the north half of section 12 and the south half of section 13. All lakes, except the first of the above-mentioned, contain good fresh water, as does Shell river. At low water this river has an average cross-section of about 140 square feet and flows at the rate of one and a half miles per hour. There are no water-powers along this river. From general indications, the summer

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28.—*Continued.*

season must be short, but the growth rapid. Light summer frosts occurred. Wood is the only fuel available. There are no stone-quarries nor minerals of economic value. Game appears to be scarce. Shell river contains fish that are common to all Manitoba rivers. The large lake in sections 1, 2, 11, and 12, until about four years ago, contained fish in abundance, but at present none are to be found.—*R. H. Knight, D.L.S., 1904.*

A good trail from Roblin, a small village on the Canadian Northern railway in township 26 range 28, runs to within a few miles of the township.

30. This township is suitable only for mixed farming, and is third-class, the tillable soil averaging a poor quality. The western half of the township is somewhat open, but is quite hilly and inclined to be gravelly, while the eastern part is covered by poplar, spruce and jackpine bush, and is badly broken by numerous swamps and muskegs, together with Shell river and its many adjacent ravines. The best timber is found in sections 24, 25, 36 and 31, and is principally spruce of good size and quality. In sections 9, 10, 15, 21 and 22 there is much swamp land which is timbered with spruce up to twelve or fourteen inches in diameter with some tamarack. All the timber of this township is included in the Hanbury timber limits, and the best timber is being cut. Shell river valley does not produce hay as would be expected, and but little grows elsewhere in the township. Fresh water is found in abundance in many small lakes and creeks. Shell river has an average cross-section of about 140 square feet and flows at a rate of one and a half miles per hour at low water. This river is very crooked and has numerous rapids. At a great expense a small water-power could be developed, but the apparent natural resources of the surrounding country do not warrant the development of such power. There were two light frosts during the month of July. The nights are always cold, and from general indications early frost might be expected. The only fuel available is poplar, spruce, and tamarack, of which there is abundance. Stone-quarries and minerals of economic value are not apparent. Deer and black bears are quite abundant, the bears at times becoming an annoyance about camp. Fish similar to those found in the rivers of Manitoba are plentiful in Shell river, also in the lakes in sections 9 and 10.—*R. H. Knight, D.L.S., 1904.*

A good trail from Roblin, a small village in township 26, range 28, and

31. located on the main line of the Canadian Northern railway, runs to within six or eight miles of the township. Along the western side of township 30, range 28, there are openings enough to get through without cutting a road. Township 31 is useful only to the lumberman. Where large timber does not exist, a dense growth of small poplar accompanied with windfall and hazel is always to be found. The township, being so extremely rough, is quite useless for any class of farming, even if it were cleared. Sections 7, 8, 16, 17, 18, 20, 21, 22, 27, 28 and 29 are rough beyond description. Spruce timber of second and third grade and ranging from one to three feet in diameter is found in sections 5, 6, 7 and 8; from one to two feet in diameter in sections 15, 16, 17, 20, 21, 22 and 28. The remainder of the sections throughout the township contain considerable spruce up to eighteen inches in diameter, but it is somewhat scattered and chiefly found in swamps and muskegs. The timber of this township is included in the Hanbury timber limit and is being cut. Small creeks or lakes containing good water are frequent, but hay is not to be found, not even in the valley of Shell river as might be expected. From general indications, the summer season is short. Frost remained in the ground until the middle of June, and summer frosts are frequent. Fuels, other than wood, are not apparent. There are no stone-quarries, neither are there minerals of economic value to be found. Moose are very plentiful.—*R. H. Knight, D.L.S., 1904.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 28—*Concluded.*

(*North outline.*)—The western three miles of this line runs through large
32. green poplar and some spruce; here, as on all the meridians, pack-horses have to be used. The surface is very rough and hilly, and the soil is of good quality.—*E. W. Hubbell, D.L.S., 1897.*

(*Subdivision.*)—From Pretoria post office, situated in section 31, township 33, range 28, there is a good wagon trail to the town of Swan River. A branch of the Canadian Northern railway from Swan River via Pretoria is now under construction. From Pretoria southward through township 33 there is but a poorly constructed surveyor's trail through the bush. There is no prairie to be found in township 32, range 28, and very little scrub. Sections 25, 26, 35, 36, 28, 29, 32 and 33 contain the lightest bush and is the easiest portion to be cleared. The north half of the township is rough, rising towards the south about 300 feet (to almost the summit of Duck mountains). The northern slope is covered by poplar up to four inches in diameter with great quantities of dead spruce trees or windfall, which is in many places almost impassable. In the southwest portion of the township there is a great deal of spruce up to six inches in diameter, mostly scattered through the growth of young poplar. In sections 19, 20, 16, 17 and 18 there is a large quantity of spruce up to twenty-four inches in diameter, though somewhat scattered and broken by small swamps and muskegs. This timber is contained in a timber limit. Sections 14, 15, 22, 23 and 24 are composed of considerable swamp and muskeg lands, covered with small spruce and tamarack up to twelve or fourteen inches in diameter. The land, generally, is rolling and inclined to be rough or broken by spruce swamps. There is an abundance of good water, obtainable from numerous small streams throughout the township. There are few sloughs or hay marshes. The soil is good, and if once cleared would be easily worked and quite suitable for mixed farming. Frosts at the date of survey (May) were quite frequent. Small sloughs were covered by ice on May 22. The only fuel obtainable is wood. There are no water-powers, stone-quarries nor economic minerals. The only game found is moose and black bears; these are in abundance and quite tame.—*R. H. Knight, D.L.S., 1904.*

RANGE 29A.

The soil in this township is of excellent quality, except in the extreme south
27. end where sections 11, 12, 13 and 14 are broken by Boggy creek ravine. The greater portion of the land in this township was scrubby prairie. There was no timber worthy of mention. There would not be much more than would suffice for temporary fencing and one winter's supply of wood. There is scarcely any available hay. Only a small percentage of the water is alkaline and a permanent supply of good water may be had in abundance by going down from twenty to forty feet. There are no stone-quarries nor economic minerals.—*C. F. Aylsworth, D.L.S., 1903.*

The soil in this township is excellent, except in the north end where the
28. surface is somewhat damaged by large muskegs and sloughs. There is no timber worthy of mention. No stone-quarries nor economic minerals were seen. There is very little available hay.—*C. F. Aylsworth, D.L.S., 1903.*

This township is easily reached by a good trail from Roblin a small village on
29. the main line of the Canadian Northern railway in township 26, range 28. This township is but one mile and a quarter wide. It is mostly covered with young poplar up to five inches in diameter or poplar and willow scrub. Sections 13 and 24 are the best sections for farming purposes. The land is gently rolling and the soil is mostly black loam with a clay subsoil. These sections have a few prairie openings. In sections 1 and 12 there is considerable wet land, large sloughs or muskegs,

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29A—*Continued.*

together with a thick growth of young poplar. There are also a few swamps with young tamarack and spruce. Sections 25 and 36 are inclined to be rough and are covered with young poplar up to four inches in diameter. The soil is poor, being generally a light sandy loam or gravel. The summer season is short, but growth is rapid, being aided by the dense heavy dews of July and August. Light summer frosts occur. Wood is the only fuel available. No stone-quarries nor minerals of economic value are found. Game is scarce, there being but few ducks and prairie-chickens.—*R. H. Knight, D.L.S., 1904.*

30. This township is easily reached by a good trail from Roblin, a small village in township 26, range 28. This township is but one and a quarter miles wide. It is quite rough throughout and covered by poplar bush and scrub. The soil is light and is not a grain producer. There are numerous small sloughs and marshes but no hay meadows. The only available fuel is poplar and spruce. Sections 35 and 36 contain considerable spruce bush, which is included in the Hanbury timber limit. No stone-quarries nor minerals of economic value are found. The summer season is short and light summer frosts occur. The only game of importance in this township is jumping deer and black bears.—*R. H. Knight, D.L.S., 1904.*

RANGE 29.

(*South outline.*)—The land along the southern boundary is an undulating prairie with occasional bluffs of poplar and scrub. The soil is sandy, and of second- and third-class quality. There is a muskeg in section 31.—*A. C. Webb, D.L.S., 1875.*

(*East outline.*)—Along the eastern boundary there are heavy poplar woods in places. The land is very stony in sections 12, 13, 24 and 25. Both the Qu'Appelle and Assiniboine rivers flow through this township.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—The Qu'Appelle valley crosses this township. Its high banks are crowded with timber. The soil in the valley is very good; elsewhere it is merely coarse sand.—*W. and D. Beatty, D.L.S., 1880.*

18. (*North and east outlines.*)—Along the eastern boundary is a high rolling prairie with occasional bluffs of poplar and willow scrub. The soil is a rich loam of first-class quality. On the northern boundary the land is stony in places. The Assiniboine river flows through section 3.—*A. C. Webb, D.L.S., 1873.*

(*Subdivision.*)—This township is traversed by the Assiniboine river. The slopes of the valley of this river are well covered with poplar. The valley bottom has good soil, but the remainder of the township is inferior.—*W. and D. Beatty, D.L.S., 1880.*

19. (*East outline.*)—The country along this line is rolling, with bluffs of poplar and willow scrub. The soil is of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(*South outline.*)—This outline crosses a slightly rolling prairie, with bluffs of poplar and willow scrub. The Assiniboine river flows in a southerly direction through section 3. An extensive muskeg occupies parts of sections 5 and 6. The land is of second- and third-class quality.—*A. C. Webb, D.L.S., 1875.*

(*Subdivision.*)—The land in this township is undulating and gravelly. East of the Assiniboine the land is fair but broken by ravines. A few bluffs of poplar furnish the only timber found.—*J. J. McArthur, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

20. (North outline.)—The Assiniboine river flows southwards through section 34. The country is a rolling prairie with scattered bluffs of poplar and with scrub. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(East outline.)—The land along this line is a rolling prairie with bluffs of poplar. The soil is a rich loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(Subdivision.)—West of Assiniboine river the land is not well suited for settlement, but is well wooded with poplar, birch and oak. On the east side the soil is good, but broken by ravines.—*J. J. McArthur, D.L.S., 1880.*

21. (East outline.)—The land along this line is of a similar character to that along the southern boundary.—*A. C. Webb, D.L.S., 1875.*

(Subdivision.)—This township is traversed by the Assiniboine river, Smith creek and a creek locally called Skunk creek; on these streams are several sites for water-powers. The land is somewhat broken by ravines, but generally is good. There is a good scattering of poplar of small size.—*R. W. Hermon, D.L.S., 1880.*

22. (East outline.)—Along the eastern boundary the country is a high rolling prairie, with bluffs of poplar. The soil is a sandy loam of first-class quality.—*A. C. Webb, D.L.S., 1875.*

(North outline.)—Sections 35, 36 and part of 34 are very high rolling prairie with bluffs of poplar. There are a number of gravel ridges. The soil is a clay loam and is of second-class quality. Sections 32, 33 and part of 34 are in the valley of the Assiniboine river, where there is some heavy timber and rich bottom land.—*A. C. Webb, D.L.S., 1875.*

(Subdivision.)—The Assiniboine river flows through the township and is joined by Thunder creek. The land is marshy in places and there are a few small lakes, but where the soil is dry it is suited to agriculture. There is a belt of good timber.—*R. W. Hermon, D.L.S., 1880.*

23. (East and south outlines.)—The southern and eastern boundaries are much broken by the valley of the Assiniboine river. The low lands in the valley of the river are annually flooded in the spring of the year. There are also many marshes and small muskegs. The slopes of the valley are timbered with poplar from two to fourteen inches in diameter. The table land is a rolling prairie, with poplar bluffs and willow scrub. The soil is of poor quality, being stony and gravelly.—*J. McLatchie, D.L.S., 1880.*

(Subdivision.)—The central and southern portions of this township are comparatively dry and well watered by two creeks. These creeks both have excellent mill sites with sufficient water-power. The fall is estimated at about 150 feet in the mile on both creeks and the current is nearly three miles an hour. The land is somewhat wet, but supports a luxuriant growth of hay, and is a black loam.—*F. W. Armstrong, D.L.S., 1881.*

24. (North and east outlines.)—The Assiniboine river flows in a southerly direction through the east portion of the township. Its valley is about a mile wide and 300 feet below the level of the surrounding country; here, there are numerous small hay marshes, willow swamps, and ponds. The plateau is an open prairie on which there are small bluffs of poplar. The soil is a sandy loam of good quality.—*J. McLatchie, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*Subdivision.*)—The township is slightly rolling and broken in the east by the Assiniboine river and its tributaries. The soil is rich, and there is sufficient good water. Hay grows plentifully, and there are several small clumps of willow and poplar scattered throughout.—*F. W. Armstrong, D.L.S., 1881.*

(*East outline.*)—The surface of this township is an undulating and scrubby prairie with a number of bluffs of poplar, small lakes, ponds and hay marshes. The soil is a sandy loam with a clay subsoil of good quality. The Assiniboine river flows in a southerly direction through this township at the bottom of a deep and wide valley. There is some maple and elm timber along the slopes of the valley.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—The Assiniboine river runs through this township. There is a luxuriant growth of timber, very little, however, being sufficiently large for manufacturing purposes. The soil is sandy.—*M. Deane, D.L.S., 1881.*

This township is easily reached by a good trail from Roblin, a village on the main line of the Canadian Northern railway, in township 26, range 28, or by a good trail from Russell, a town on the Canadian Pacific railway about thirty miles southward. Assiniboine river, running through sections 32, 29, 20, 17, 8, 5, 4, 3 and 2, makes these sections useless for grain growing. On the other hand some portions of the river valley are excellent hay producers. The best portions are the part of section 3 lying to the south of the river and in the valley, the portions of sections 4 and 5 lying to the north of the river, the portion of the north half of section 17 lying in the river valley and the east half of section 20, together with the portion of the southeast quarter of section 29, which lies to the east of the river. The west half of sections 31 and 7, together with sections 30 and 6, are about the only portions of apparently good land contained in the work which consisted of the western two tiers of sections and sections 2, 31, 4 and 9. Poplar bush, ranging from five to ten inches in diameter is found as follows: upon the sidehill contained in the east half of section 2, on the sidehill of those portions of sections 4 and 5 lying to the south of the Assiniboine river and on the sidehill to the west of the river throughout the township, excepting that portion of the sidehill in the southwest quarter at section 20 and the northwest quarter of section 29. The ravines in sections 18 and 19 are also covered with large poplar trees. The climate is considered equally as good as that of most settled portions of Manitoba. If summer frosts occur they are light and do no damage. The only available fuel is poplar wood, of which there is a lasting supply if protected from prairie fires. Minerals of economic value and stone-quarries are not found. The only game in the township is prairie-chickens and deer, both of which are scarce.—*R. H. Knight, D.L.S., 1904.*

The country hereabout is thickly covered with scrub and brush and a great deal of sapling poplar with an occasional birch or Manitoba maple. Roblin, a village of about 450 population on the Canadian Northern railway, is in township 26, range 28. The country is rolling or even hilly in some places, and although there are a great many small sloughs, marsh hay was not very much in evidence. The poplar is used locally almost altogether as a fuel. There are no stone-quarries, minerals nor water-powers. No game of any kind was noticed. The lakes in section 25 have well defined, unvarying, wooded banks, in some cases twenty feet high, and are situated in a rather hilly region. The water is sufficiently fresh for stock and no alkali was noted. In depth they must be well over ten feet in some places.—*R. C. Purser, D.L.S., 1911.*

(*North and east outlines.*)—This country is timbered with small poplar alternating with scrubby prairie. There are a number of small ponds and hay marshes throughout. Big Boggy creek flows in a southerly direction through section 35. The soil is a clay loam of first-class quality.—*J. McLatchie, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*Subdivision.*)—This township is generally well fitted for settlement, but much broken in the northern and western parts by the valleys of Big Boggy creek and the Assiniboine river. Over one-third of the surface is gently rolling. The water in the creek is slightly alkaline, containing some mineral substance also. The surface is heavily wooded, principally with poplar and balm of Gilead in the valleys of the river and creek, with some birch, maple, oak, spruce and pine; there is considerable dry wood and windfall. There are some large-sized ponds or lakes. The soil is first-, second-, and third-class, being a deep loam in the valleys and stony and gravelly on the side hills, with a good deal of muskeg in sections 23, 25, and 26.—*D. C. O'Keefe, D.L.S., 1881.*

This township is easily reached from the village of Roblin by a good graded road which enters the township along the north boundary of section 1. Roblin is but six or eight miles from the centre of this township, and is located on the main line of the Canadian Northern railway. The surface is badly broken by the Assiniboine river and Big Boggy creek, the valleys of which are from one to one and a half miles in width, and from 250 to 300 feet deep. Fully one-third of the township is rendered useless for farming by these valleys. About one-sixth of the sections are occupied by recent settlers, and a few sections are patented and unoccupied. The best quantity and quality of land is that portion lying south of the creek and east of the Assiniboine river. The soil ranges from a black loam to a rich clay loam. The lands lying to the north of Big Boggy creek are second-class, but are covered with considerable scrub and large poplar. Throughout the township the land is generally level or gently undulating. The southeast quarter of the township is mostly covered with poplar and willow scrub, with poplar up to three inches in diameter. Sections 8 and 17 are somewhat gravelly and mostly prairie. Sections 21, 28, 29, and 5 are covered with large poplar from six to ten inches in diameter. The only hay found is in the valley of the Assiniboine river, the most of which is in sections 6, 18, and 19. The Assiniboine, during spring floods, rises some ten or twelve feet, and thereby floods the whole valley at many points. Water is apparently scarce, except in the above-mentioned streams. There are not more than a dozen sloughs throughout the township. Bodies of water which were considered small lakes a few years ago, are no longer such, but have dried up considerably and may now be called sloughs. The settlers obtain good water from wells at a depth of about twenty-five feet in many places. The climate is considered equally as good as that in any part of Manitoba. If summer frosts occur, they are very light and do no damage. There are no water-powers. The only fuel available is poplar wood. No stone-quarries nor minerals of economic value were seen. A few prairie-chickens were the only game seen.—*R. H. Knight, D.L.S., 1904.*

(*East outline.*)—The country along this line is timbered with small poplar, **27.** with prairie openings which are nearly all covered with scrub. The soil is a rich black loam of first- and second-class quality. Big Boggy creek flows in a southeasterly direction across the northeastern corner of section 1. The valley of this creek is about three-quarters of a mile wide and 150 feet deep.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—Big Boggy creek passes through this township, affording many good sites for water-power. The country is well suited for stock-raising. There is an abundance of small timber with a great deal of scrub.—*R. W. Hermon, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 29.—*Continued.*

(*North and east outlines.*)—The surface is nearly all timbered with small
28. poplar, spruce and tamarack, much of which, however, has been killed by fire. There are a number of prairie openings on which there is a great deal of scrub. There are also many small lakes, ponds and hay meadows. The soil is a sandy loam of second-class quality.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township is traversed by Big Boggy creek and its tributaries, affording many good sites for water-power. It is admirably adapted to stock-raising. There is an abundance of small timber. The prairie is generally covered with small scrub.—*R. W. Hermon, D.L.S., 1880.*

From section 27, township 29, range 30, we followed the Shell River road
29. up the valley of Little Boggy creek as far as the north boundary of section 26. Here we bridged the creek and cut a road easterly as far as the southwest corner of section 32, township 29, range 29, where we made our first camp. We had considerable difficulty in getting up the south bank of the valley of Little Boggy creek with the outfit, as the valley is very deep here and the banks very steep. Otherwise the road is in fair condition. From this camp we cut a road southeasterly across sections 29 and 28, southerly through section 21 and easterly through section 15, making our second camp in the northeast quarter of section 15. The soil for the most part is a clay loam from four to twelve inches in depth with a clay subsoil. It is very rich in quality and is suitable for agricultural purposes. The surface in the northern part of the township is very uneven and much broken by sloughs and muskegs. It is covered with poplar and willow scrub and windfall. In the southern half of the township the surface is gently rolling and is about half prairie, the remaining part being covered with scattered poplar from six to twelve inches in diameter with poplar and willow scrub. There are a few small spruce bluffs in the western tier of sections with spruce from ten to fifteen inches in diameter but these are not extensive enough to be valuable as a timber reserve, although a number of fine building logs could be secured here. Many large hay sloughs exist in the two southern rows of sections. The hay is of good quality and would yield about 100 tons per section. There are many lakes in the township and the water in them is fresh, but the streams are small and mostly dry up during the summer season. There is no water-power available in the township. The land is not liable to be flooded except in the hay sloughs. These are flooded to a depth of about two feet in the spring, but dry up during the summer. The climate is very changeable and summer frosts are very frequent. Wood for fuel may be had in any part of the township, but no coal nor lignite exists. No rock, stone-quarries nor minerals of economic value were seen. A few elks, moose and deer are to be found and many partridges, prairie-chickens and rabbits.—*C. Harvey, D.L.S., 1904.*

To get to township 30 we followed our old road back as far as section 32,
30. township 29, range 29, and from there we cut a road northerly into section 9, township 30, range 29, where we camped in the valley of Little Boggy creek. From this camp we surveyed the south half of the township and then made a road north into section 28, from which place we finished the township. The road, with the exception of a few steep hills, is very good. The surface of the township is very uneven and covered with poplar scrub and windfall. The soil in the hollows is a clay loam from six to twelve inches deep with a clay subsoil. On the ridges the surface loam has been worn off by the action of the weather and a heavy bluish clay is left. Sections 13, 24, 25 and 36 and parts of sections 26 and 35 have a growth of spruce from ten to twenty inches in diameter which would make a timber limit large enough to keep a portable sawmill going for several years. There is no hay in the

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

(*Subdivision.*)—The township is extremely rough and so broken by deep ravines that, although the land is good and well watered, it is of little value for agricultural purposes. There are a few good sections in the southwestern part of the township, and the valleys afford fairly good grazing lands. The township is watered by Qu'Appelle river, Scissors, and several other creeks, all of which have steep rough gorges. The flat lands of the Qu'Appelle have poplar timber of fair size, and a thick growth of underbrush.—*Jones and Staunton, D.L.S., 1881.*

(*North outline.*)—The country along this line is rolling prairie with a sandy
18. loam soil which is gravelly in places and is partially covered with scrub and dead and fallen poplar timber. The land is best suited for grazing.—*A. C. Webb, D.L.S., 1880.*

(*East outline.*)—This line traverses rolling land, with sandy loam soil, and is partially covered with thick poplar scrub. It is splendid farming country.—*A. C. Webb, D.L.S., 1880.*

(*Subdivision.*)—There is some good land north of the Qu'Appelle river, but it is much broken by numerous sloughs and ponds, some of which contain very good water. The land is undulating with high hills, and has a black loam with a clay subsoil. The hills and banks of the ravines have a light stony soil. South of the river the land is flat and marshy, broken by rocky ridges and covered with willows. On this side of the river, poplar grows large enough to be useful for building purposes.—*Staunton and Jones, D.L.S., 1881.*

(*South outline.*)—The country along this line is undulating and broken by
19. swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous, but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*Subdivision.*)—The southern and western portions of the township contain numerous swamps which are separated by ridges ten to thirty feet high. The soil between the swamps, except that on the tops of the ridges, is of good quality. Bluffs of poplar are very numerous, but the timber on these is small and useful only for fencing and fuel. Water is plentiful everywhere.—*R. C. McPhillips, D.L.S., 1880.*

(*South outline.*)—The country along this line is undulating and broken by
20. swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and especially near the streams, is well adapted to agricultural purposes. Bluffs of poplar are very numerous, but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*Subdivision.*)—This township is rolling prairie, broken by swamps and ponds. The valley of the Cutarm river is about 150 feet deep, and has more bluffs of poplar and oak than any other part of the township. Where not wooded, this district is covered by thickets of hazel and willow.—*R. C. McPhillips, D.L.S., 1880.*

This township contains a large quantity of good land, the soil throughout
21. being black loam underlain by clay, which is sometimes mixed with coarse gravel. Willow and poplar bluffs are numerous all over the township, and in all the bluffs dead poplars of good size are found. Smith creek, the water in which

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

is good and pure, flows across the township in a gently sloping valley. Water holes and marshes abound throughout, yet this district may be considered a very fair one for farming purposes.—*Evans and Bolger, D.L.S., 1880.*

(*North outline.*)—The country along this line is undulating and broken by
22. swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*Subdivision.*)—The southwest quarter of the township is chiefly rolling prairie with occasional clumps of willow and poplar while the southeast quarter is more thickly interspersed with clumps of willows and scattered timber. The land in this part of the township is of good quality, the soil being a black loam. The northern part is more thickly timbered, and has numerous small lakes and ponds scattered throughout. The water, in general, is good.—*Evans and Bolger, D.L.S., 1880.*

(*South outline.*)—The country along this line is undulating and broken by
23. swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*Subdivision.*)—This township is chiefly composed of rolling prairie with the exception of sections 4, 5, 6, 7, and 8, which are mostly covered with small poplars and willows. In sections 7 and 8 there is a bluff of large poplar which could be used for building purposes. Ponds are very numerous, especially in sections 11, 12, 13, 14, 23, 24, 35, and 36. The soil is a rich black clay loam.—*J. Stewart, D.L.S., 1880.*

(*North outline.*)—The country along this line is undulating and broken by
24. swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous, but the timber is small, and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*Subdivision.*)—The land in this township is rolling prairie with a few bluffs of green poplar and many of dry poplar or brulé. Sections 36, 25, 24, and 35 are covered chiefly with windfalls and brulé. The southern and eastern tiers of sections are low and wet. The soil, generally, is a black loam.—*T. Stewart, D.L.S., 1880.*

The land in this township is, where dry, of excellent quality. In the east
25. half there are a number of large bluffs of poplar, but swamps and marshes are so numerous as to render it unfit for settlement. The west half was at one time well wooded, but has been swept by fires. The dead trees, mostly standing, will furnish fuel for a long time. Along the south and west, the country is more open and is overgrown with willow and scrub.—*J. J. McArthur, D.L.S., 1881.*

Trails along the road allowances, improved in places, lead to this township from Saltcoats, about fifteen miles southwest on the Canadian Pacific railway. The Rossburn extension of the Canadian Northern railway, as projected, intersects the north-

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

east corner of the township. The soil is generally a clay loam, with more or less black loam in the low places. The dry land is good for the growing of grain crops, while the low land affords more or less hay land, thus making this township a good one for mixed farming. The surface is gently rolling with many low places, and considerable scrub pretty evenly mixed with prairie throughout the township. There is no timber of any value, but bluffs of poplar fit for fuel and fence posts are found in nearly every section. Many of the numerous sloughs have a small margin of hay around them, even in the wettest seasons. The water in the sloughs and wells dug by settlers is fresh and good. There are no water-powers nor streams. The climate this season was all that could be desired for the maturing of grain crops, although this township was found to be very wet for the procuring of the usual hay crop. There are no minerals, coal nor stone-quarries in the township. A few boulder stones may be obtained in places. A few ducks and prairie-chickens comprised all the game seen.—*J. Francis, D.L.S., 1909.*

(*North outline.*)—The country is undulating and broken by swamps, marshes, **26.** etc., which cover about twenty per cent of the area. The rest of the land is good, and especially near the streams, well adapted to agricultural purposes. Bluffs of poplar are frequent everywhere. The timber is small and useful only for fuel and fencing. Water is plentiful and good.—*E. Bray, D.L.S., 1880.*

(*Subdivision.*)—The land throughout this township is of good quality, but is very much broken by swamps, sloughs and marshes. There are some large bluffs of poplar suitable for building purposes and dry poplar fit for fuel. The general character of the country is undulating, and, where not timbered, is overgrown with willow and scrub.—*J. J. McArthur, D.L.S., 1881.*

By far the greater part of this township is open. Scrub and timber, suitable only for fuel and fencing, are to be found in the northwest and southeast corners of the township. The soil is generally a deep sandy and clay loam. There are no permanent settlers in this township, but two ranchers from near Saltcoats put up hay, which is found here in limited quantities. Trails lead in from different outside points. The township as a whole is a very suitable one for agricultural purposes. It has been proved that plenty of good wholesome water may be had by digging at reasonable depths. Game was not very plentiful in the early part of the season, but deer, prairie-chickens, and ducks became quite abundant during the open season and more particularly in the vicinity of ploughed fields, hundreds of prairie-chickens were to be seen in the evening.—*U. F. Aylsworth, D.L.S., 1898.*

The east half of this township is a high dry prairie, with a deep, rich, alluvial **27.** soil varying from fifteen to thirty inches in depth, and a thick growth of herbage and shrubs, but with few poplars. The western half, with a similar soil, has more bluffs, particularly the south and west lines, but never enough in any bluff to have it subdivided, yet there will be sufficient for the first settlers. On the whole it is well adapted to agricultural pursuits.—*W. Wagner, D.L.S., 1882.*

There were a number of ranchers living in his township who each owned a fine lot of cattle, and were doing well. This township is exceptionally favourable for ranching on account of the abundance of wholesome water to be found in Stony creek and the spring creek tributary thereto, in the valleys of which are to be found considerable quantities of hay; large quantities are also to be found in scattered patches throughout the township. The township might be described as half scrub and timber, and the other half scrubby prairie. It is a desirable one for settlement,

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

the soil being a rich sandy and clay loam of good depth. Good roads are to be found leading in all directions throughout the township. A first-class road has been made from the northeast corner of section 10 and follows the meridian road allowance northerly to Kamsack post office.—*C. F. Aylsworth, D.L.S., 1898.*

(*North outline.*)—This line passes through undulating prairie covered with
28. considerable scrub and some willow marsh. The soil is a sandy loam. Three creeks, each containing good pure water, cross this outline.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township may justly be divided into two parts. The east half is a high dry prairie covered with willow scrub and clumps of willow but has very few poplar of any value. The alluvial soil here is from eighteen inches to three feet in depth; the subsoil is a yellow sandy loam containing indications of lime. The west half has more poplar bluffs and although the supply is not very extensive it will be of great value to the settlers. The township is well provided with good drainage.—*W. Wagner, D.L.S., 1882.*

Only the north boundaries of the western range of sections were surveyed. These sections are adapted to mixed farming, being half open with plenty of hay. In section 7 there are a few bluffs of poplar which averages eighteen inches in diameter.—*J. E. Woods, D.L.S., 1893.*

This township is well adapted to settlement, the soil being a heavy clay loam.
29. The surface is rolling and well watered by numerous creeks. The northern part of the township is rather low and marshy but is well covered with timber for fuel and building purposes. The flats along the banks of the Assiniboine are excellent hay lands. Kamsack creek runs through the centre of the township in an easterly direction and drains the land thoroughly.—*W. Wagner, D.L.S., 1882.*

Only that part of section 24 which lies south of the Indian reserve was surveyed. On the east bank of the Assiniboine river, not a quarter of a mile from the east boundary of section 24, is a handsome, stone schoolhouse for the education of Indian children; it is under the direction of a Presbyterian minister. This building, and the adjoining ones, can be seen for miles and give the country the appearance of advanced civilization. There is a post office near the centre of the township, where quite a number of settlers receive their mail.—*J. E. Woods, D.L.S., 1898.*

This is a fine township for cultivation, as it is first-class soil, is well watered by creeks, small lakes and the Assiniboine river, and has plenty of wood for fuel and fencing. There is considerable hay land throughout, and excellent tracts suitable for grazing purposes. There are several settlers in the township, some of them having herds of stock, which, judging from their condition, would be of good market value. It is said that many of the finest cattle in the territories are brought from here, and it is very strange that this district is not more settled.—*E. W. Hubbell, D.L.S., 1897.*

This part of the township south of the Assiniboine river is close to Kamsack, a divisional point on the Canadian Northern railway. Good trails with two bridges crossing the river give easy access to this town for all the settlers living south of the river. The soil is a black loam of the very best quality for the growing of grain. The surface is gently rolling with a gradual slope to the valley of the river. Along the river there are considerable flats or bottom lands growing fine crops of hay in many places. The land is mostly prairie, with many bluffs of poplar and willow scattered over the township. There is no timber. The soil is so good that hay grows everywhere in favourable seasons. It is of the very best quality on the uplands. The

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

water is fresh and good. The Assiniboine river enters the township in section 34, and flowing in a southeasterly direction leaves it in section 24. The river is from one to one and a half chains in width with a depth of four to six feet, and a current of two and a half miles per hour. Kamsack creek, a small tributary joining the river at the crossing of the north boundary of section 13, comes from the west. This creek, although small, has numerous branches with small valleys which give a good natural drainage to the southwesterly and westerly portions of the township. Along the river flats some of the land is subject to flooding when the river is at its highest stage. This, so far, has been only about once every twenty years. There are no water-powers, the surface of the valley being so little above the bottom of the river that it is difficult to dam to obtain power. No summer frosts occurred this season. There is very little fuel, only a few bluffs of small poplar which the settlers should conserve as much as possible. There are no quarries, coal nor other minerals, but a few boulders may be obtained along the east side of section 13. There is no game, owing to the township being well settled. The land is nearly all taken up and about fifteen to twenty per cent cultivated, growing the finest crops of grain seen in either Manitoba or Saskatchewan this season.—*J. Francis, D.L.S., 1909.*

A notable feature in the topography of this township is Whitesand river, **30.** crossing it from southeast to northeast and dividing it agriculturally as well as topographically into three areas, viz.: the valley of the river itself, the important area on the west of this and the tract of high land in the northeast quarter of the township. The westerly tract comprises sections 5, 6, 7, 8, 18 and 19 and constitutes a sort of flat ridge along the west side of Whitesand valley, at an elevation of about seventy-five feet above the same. The surface is gently rolling and is composed of prairie and tracts covered more or less with poplar and willow scrub. The greatest development of prairie is in the southerly part, where there are also some large hay sloughs. The poplar scrub areas are in reality tracts of *brulé* from which the timber was burnt some years ago. The whole of this part of the township would appear to have been wooded to some extent for scattered dead poplar trees can be seen all over. There are a few sloughs, most of them producing hay. The soil is a dark loam with a clay subsoil and is generally of excellent quality. The advent of the railway makes these lands very desirable. The land between Whitesand and Assiniboine rivers is level prairie with much scrub, willow, etc., and some areas of young poplar up to three inches in diameter. There are only a few scattered bluffs with trees large enough for firewood. The soil is the same clay loam but not uniformly as deep as on the ridge west of the Whitesand. There are a few boulders in spots along the old Pelly trail. There is fine land in parts of sections 29, 30, 31, and 32. There are a few hay sloughs, especially along the Assiniboine where the land is valuable chiefly on this account and for grazing. A flat stony tract extends between the Whitesand and the western ridge above described from the south boundary as far north as the point where the old Pelly trail crosses the river. The soil is rather damp and it is the poorest piece in the township, being open prairie. The Assiniboine flows in its usual tortuous course across the township with banks from six to twelve feet high, with a narrow fringe of very tall and thick willows, including the grey willow species, which grows down to the water's edge. The current at low water appears to be feeble and we noted two rapids where trails cross. As already noted the extensive hay sloughs along the river afford good opportunities for ranching. There are a few western maple trees at points along the stream. The Whitesand river is from fifty to one hundred links in width with banks from eight to twelve feet high and an easy current over a clay bed. At the shallow places boulders occur. The fringe of willows is light and in places altogether absent. The banks at the old Pelly trail crossing are

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

pretty steep for a loaded vehicle. Altogether this township, or at least a part of it, is a valuable one for settlement, having the excellent farming area west of Whitesand river and the farming and hay lands of the other portions, there is an obvious drawback in the absence of timber. This would have to come from the Duck mountains to the east. There has evidently been at one time a poplar forest on the high land west of the Whitesand, but all that is left is a few scattered dry trees which are at the present time being removed to the Doukhobor village for fuel.—*J. McAree, D.T.S., 1902.*

This township can be reached by a good trail running from Kamsack, a station on the Canadian Northern railway. The soil in the part of the township lying west of Whitesand river is a black loam with clay and sand subsoil and is well adapted to grain growing. The portion lying between the Whitesand and Assiniboine rivers is largely alkaline flats covered with short grass. The surface west of the Whitesand is rolling, while that between the two rivers is level. There is some willow and poplar scrub between the two rivers and some small poplar and willow along the Whitesand near its mouth. There is sufficient hay in the sloughs for the requirements of the settlers. Whitesand river, a stream averaging a chain in width and from two to six feet in depth enters the township on the west boundary of section 31, and running southeasterly joins the Assiniboine in section 4. The water of the Whitesand is fresh and of excellent quality. Assiniboine river forms the easterly boundary of this township. Water-power could easily be developed on Whitesand river by the construction of dams but the amount of energy which could be developed would be small and uncertain. Fuel is scarce throughout the township. The settlers obtain their supplies of wood from Duck mountain. There are no minerals nor stone-quarries. There is a good market for farm produce at Kamsack, a divisional point on the Canadian Northern railway. The climate is good and generally free from severe summer frosts. Wild ducks and prairie-chickens are plentiful. Jackfish and goldeyes are plentiful in Whitesand and Assiniboine rivers. Small wild fruits grow in great profusion in the sheltered spots along the river banks.—*W. J. Deans, D.L.S., 1907.*

That part situated on the west side of the Assiniboine river, which flows
31. in a southeasterly direction from the northeast corner of section 31, is practically open and consists of high rolling lands. That part on the east side of the river and outside of the Indian reserve, is covered with a thick growth of young poplar and heavy willow scrub. The soil is light throughout. Assiniboine river is practically at the foot of Duck mountain.—*A. F. Martin, D.L.S., 1900.*

A few Galicians have settled in this district, but little progress has been made at farming as yet on account of the dense forest which has to be cleared before the settlers can farm or make roads.—*G. A. Bennett, D.L.S., 1912.*

(*Partial.*)—All the sections adjoining the Keeseekoose I. R. on the
31 & 32. east side are fractional. A road along the east side of these sections is being opened out to give the settlers a more direct road to Kamsack. The surface is high and gently rolling, with patches of scrub and open places. The soil is of good quality, being composed of black loam and clay subsoil, and is the best of grain land. There are no minerals, timber, water-powers, stone-quarries nor game in these townships.—*J. Francis, D.L.S., 1909.*

(*North outline.*)—Lac La Course, which is about two miles wide on the line,
32. occupies the whole of section 31, range 31, and nearly all of section 36 in this range. It appears to be a shallow sheet of water, extending north for over half a mile and south for several miles, and is considerably increasing in breadth on

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 32—*Continued.*

the south side. From this lake westward the line runs through Keeseekoosie I. R., which occupies sections 35 and 34 and a fraction of section 33, after which it enters a scrubby rolling prairie or burnt country, interspersed with clumps of dry or green poplar and willow. The soil is of fair quality.—*P. R. A. Belanger, D.L.S., 1897.*

(*Subdivision.*)—The township is badly cut up by the Hudson's Bay Company's reserve, and the Keeseekoosie I. R. as well as by lac La Course which covers the whole of section 36 and part of section 25. The Assiniboine river enters the township from the north in section 19, and flows out in section 6. Sections 23, 24, 13, 14, 11, 12, 1 and 2, consist of hilly and very broken lands, being part of Duck mountain which extends as far north as lac La Course, and westward to the Assiniboine. The soil is invariably second-class.—*A. F. Martin, D.L.S., 1900.*

This district was reached by a good trail from Kamsack, a town on the Canadian Northern railway. The part west of the Assiniboine river is well suited for mixed farming, with the exception of a swampy portion near the river. The soil on the eastern part is sandy and almost worthless. It is mostly covered with poplar of no commercial value. There are some patches of hay and feed. No part of the surveyed portion was under cultivation, but the neighbourhood did not suffer very much from the unusually severe frosts of this fall. Water is mostly obtained from the Assiniboine river which runs from north to south and bounds part of the township. The wells yield only an alkaline water. Poplar is the only fuel used. Ducks, prairie-chickens and partridges are numerous. The Indians from the reserve immediately to the east kill a deer occasionally. A few fish are caught in the Assiniboine river. There are no water-powers. No minerals were observed.—*C. Rinfret, D.L.S., 1911.*

RANGE 33.

(*East outline.*)—The land is rolling and mostly covered with small poplar
17. and dense scrub. The soil is a sandy loam with some gravel.—*A. C. Webb, D.L.S., 1880.*

(*South outline.*)—The country along this line is rolling prairie, with considerable poplar and willow, and is very well adapted to agriculture. The soil is of good quality.—*A. L. Russell, D.L.S., 1876.*

(*West outline.*)—This country is rolling land covered with young poplar and willow scrub, and is well adapted to agriculture.—*A. L. Russell, D.L.S., 1876.*

(*Subdivision.*)—The township generally consists of good land almost entirely covered by young poplars, willows, wild roses and other thick underbrush. This district has been frequently fire-swept and consequently there is no timber of any value except for fuel and fencing. The township is well watered by numerous creeks, most of which flow through deep ravines. Although it will take quite a lot of time and labour to bring this country under cultivation, it will, in our opinion, well repay the cost.—*Staunton and Jones, D.L.S., 1881.*

(*North outline.*)—The land in the vicinity of this line is rolling prairie with
18. a sandy loam soil which is gravelly in places and partially covered with islands of scrub and some dead and fallen poplar. The country is well adapted to grazing.—*A. C. Webb, D.L.S., 1880.*

(*East outline.*)—The land is rolling and mostly covered with small poplar and dense scrub. The soil is a sandy loam with some gravel.—*A. C. Webb, D.L.S., 1880.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 33—*Continued.*

(*West outline.*)—Although there is considerable broken country the land along this line is very well adapted to agriculture and grazing. Qu'Appelle river runs through section 19. The timber consists of oak, poplar and scrub.—*A. L. Russell, D.L.S., 1876.*

(*Subdivision.*)—In that portion of the township north and east of Kaposvar creek there are numerous ponds and marshes, but generally the land is good and is covered with brush and a few clumps of poplar. The part south and west of the creek is excellent land covered with young poplar, underbrush and some large poplar and scattered oaks. The township is well watered by good streams, the principal one being Qu'Appelle river and Kaposvar creek. The valleys of these streams are of little use for farming but both contain a good growth of large timber which would be suitable for building purposes. Some power could be developed on the Kaposvar creek.—*Staunton and Jones, D.L.S., 1881.*

19. (*North outline.*)—The country is a rolling prairie with numerous sloughs, hay marshes, and willows, and has a second-class soil.—*W. Wagner, D.L.S., 1882.*

(*East and south outlines.*)—The country along this line is undulating and broken by swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*West outline.*)—The country along this line is rolling with numerous gravel ridges and a rather light soil. In section 6 there is some willow, stunted oak and low scrub and a gully crossing at the north end. Kaposvar creek crosses this boundary in section 7. In the northern part there are numerous small meadows and swamps and a few poplars. The soil is second-class.—*A. L. Russell, D.L.S., 1881.*

(*Subdivision.*)—This township is rolling prairie, rather stony and full of small ponds and marshes many of which are alkaline. The soil is third-class, and there are numerous bluffs of poplar and patches of willow and poplar scrub. Kaposvar creek enters the township in section 9 and leaves it in section 3. It has a valley about half a mile wide and is 200 feet below the level of the plain.—*W. and D. Beatty, D.L.S., 1881.*

20. (*North and east outlines.*)—The country along these lines is undulating and broken by swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams, is well adapted to agricultural purposes. Bluffs of poplar are very numerous but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*West outline.*)—The country along this line is open rolling prairie with gravelly ridges, a few scattered poplar and willow scrub. The soil is rather light, becoming sandy in the northern part.—*A. L. Russell, D.L.S., 1876.*

(*Subdivision.*)—This township is rolling prairie, with bluffs of poplar, willow, and very much broken by small ponds and hay marshes. The soil is third-class.—*W. and D. Beatty, D.L.S., 1882.*

This country is very much broken by hay swamps, sloughs and small bluffs of young poplar, with heavy willow underbrush. In a few years, provided the district is not fire-swept, the young trees will be suitable for firewood. The township is not suited to grain growing, but is well adapted to grazing.—*W. Wagner, D.L.S., 1882.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 33—*Continued.*

21. (*East outline.*)—This line traverses a bushy, rolling prairie with numerous swamps and some willows. In section 13 there is a large pond with a swampy margin. The soil is second-class.—*E. Bray, D.L.S., 1880.*

(*West outline.*)—The country along this boundary is rolling prairie with a few scattered bluffs of poplar. The soil in the southern part is poor while that in the north is light and good. In section 16 there are some light sandy ridges. Cutarm river, on the southern slope of which there is some large poplar and birch, crosses the line in section 21.—*A. L. Russell, D.L.S., 1876.*

(*Subdivision.*)—This township is a little over three miles in width and contains a large percentage of good land which is not so badly broken up by marshes and ponds as the townships to the north and west. There is a considerable quantity of small poplar scattered all over the township. Cutarm river, a stream of about fifteen to twenty feet wide and two to three feet deep, flows southeasterly through the southwestern part of the township in a deep valley which is about a quarter of a mile wide and over one hundred feet deep. The water in this river is of the very best quality. On the whole this township is very fair for farming purposes.—*Evans and Bolger, D.L.S., 1880.*

22. (*North and east outlines.*)—The country along these lines is undulating and broken by swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous, but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*West outline.*)—The southern part has some poplar and willow bluffs and a light but good soil. The central part is good grass land with numerous bluffs and thick poplars. In the northern part there is some scrub, dry swamps and a few clumps of dead poplar. Section 28 is *brulé*.—*A. L. Russell, D.L.S., 1876.*

(*Subdivision.*)—This township, for the most part, is too wet for a farming country, but it is fairly well suited for grazing. Fully two-thirds of the surface is covered with poplar and willow and a large percentage with marshes and ponds around which there is plenty of hay. The country has been frequently overrun by fire with the result that there are only a few scattered patches of timber of any size. There are numerous small lakes of good fresh water in the northern part. Where the land is dry the soil is of excellent quality. Granite boulders occur frequently, but no rock formation is visible.—*Evans and Bolger, D.L.S., 1880.*

23. (*South outline.*)—The country along this line is undulating and broken by marshes which cover about twenty per cent of the area. The rest of the land is good and especially near the streams is well adapted to agricultural purposes. Bluffs of poplar are very numerous, but the timber is small and only useful for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*West outline.*)—The country along the southern part of this outline is undulating prairie with some small meadows and clumps of poplar in section 2, some willow bushes in section 11 and some large poplar in section 14. The northern part is open rolling prairie with some low willow and rose-bush in section 26. The soil throughout is light and gravelly.—*A. L. Russell, D.L.S., 1876.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 33—*Continued.*

(*Subdivision.*)—With the exception of the southern part where there is a large swamp with many small ponds, this township is rolling prairie. Around the marsh there is a large amount of poplar bluff which will be valuable to settlers on the surrounding good lands.—*W. Wagner, D.L.S., 1882.*

The country in this township is rolling prairie with a good deal of meadow. There are scattered bluffs of willow and poplar and clumps of willow and poplar brush and scrub throughout the whole area.—*C. F. Miles, D.L.S., 1880.*

(*North outline.*)—The country along this line is undulating and broken by
24. swamps and marshes which cover about twenty per cent of the area. The rest of the land is good and, especially near the streams, is well adapted to agricultural purposes. Bluffs of poplar are very numerous, but the timber is small and useful only for fuel and fencing. Water is plentiful everywhere.—*E. Bray, D.L.S., 1880.*

(*South outline.*)—This line traverses a rolling prairie broken by a great deal of marsh and a few willows.—*W. Wagner, D.L.S., 1882.*

(*West outline.*)—The country along this line is rolling prairie, with some willow and dry poplar in sections 14 and 23 and a few patches of scrub in the northern part. The soil is of good quality, although somewhat light in the southern part.—*A. L. Russell, D.L.S., 1876.*

(*Subdivision.*)—The country is partly rolling prairie intercepted by many marshes and sloughs and covered with willows. There are a few bluffs of poplar which will afford timber enough for the erection of a few houses and provide for fuel and fencing.—*W. Wagner, D.L.S., 1882.*

The land in this township is of excellent quality, and although broken by
25. swamps and marshes, is well adapted to settlement or grazing purposes. With the exception of a few bluffs of poplar the township is devoid of timber, but an abundant supply can be had from the townships to the west. The water in the south part is slightly alkaline. The country is undulating and mostly overgrown with willows and scrub.—*J. J. McArthur, D.L.S., 1881.*

(*North outline.*)—The country is undulating and broken by ponds, marshes,
26. etc., about twenty per cent being of a swampy nature. The remainder of the soil is good and is well adapted to agricultural purposes, especially near the streams. There are numerous bluffs of poplar mixed with willow, but the timber is small and useful only for fuel and fencing.—*E. Bray, D.L.S., 1880.*

(*East outline.*)—The country is level prairie with a good deal of willow scrub, especially in the northern part. The soil is mostly black loam with a clay subsoil and is first-class.—*C. F. Aylsworth, D.L.S., 1898.*

(*Subdivision.*)—The land in this township is undulating and of good quality, but is much broken by swamps and marshes. There are a few bluffs of green poplar, and the country is mostly overgrown with willow and scrub, with groves of dry poplar.—*J. J. McArthur, D.L.S., 1881.*

This township is mostly covered with willow bushes and poplar. The surface
27. is low in places, but these could be easily drained. The soil is a rich loam. There is no timber of commercial value.—*W. Wagner, D.L.S., 1882.*

TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

RANGE 33—*Continued.*

- 28.** (*North outline.*)—The country is prairie with a good deal of willow scrub and some young poplar. A small creek crosses the line. The soil is a sandy loam.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This township is covered with heavy willow bushes. There are some large poplar trees, but not sufficient for a forest reserve. They will, however, be of great help to settlers in the adjoining townships. The soil is a rich loam, and there are very few stones.—*W. Wagner, D.L.S., 1882.*

- 29.** The country is prairie with much scrub, thick willow and poplar. There are some marshes, and a small lake in section 36, which is a poor section. The southern part is first-class land and the central is second-class. A creek crosses the eastern boundary in sections 1, 13 and 24.—*W. Wagner, D.L.S., 1882.*

- 30.** (*North outline.*)—This part of the township is prairie, covered with scrub and brulé, green poplar from four to ten inches in diameter, and some dead poplar in places. It is well watered by creeks and the Assiniboine river. The soil is a good clay or sandy loam.—*J. McLatchie, D.L.S., 1880.*

(*Subdivision.*)—This is a fractional township adjoining the second meridian, being composed of a single tier of broken quarter-sections. The east boundary was run parallel to the second meridian. The surface is high, open prairie with some scrub and a few hay sloughs. The soil is a fine clay loam and is all, or nearly all first-class. The only timber is a few scattered dry poplar. The whole township is good farming land.—*J. McAree, D.T.S., 1902.*

- 31.** The country is high rolling prairie with a good deal of scrub. There are a few willows and an occasional hay meadow. The soil is second-class being a sandy loam with a clay, sandy or gravel subsoil.—*A. F. Martin, D.L.S., 1899.*

- 32.** (*North outline.*)—This line is only thirteen chains long and runs through open prairie. The soil is of fair quality.—*P. R. A. Belanger, D.L.S., 1897.*

(*Subdivision.*)—The country is level prairie, with a few willows and some scattered scrub. There is some brulé and dry poplar in section 13, and some fallen timber and second-growth poplar in section 36. The Assiniboine river crosses the east boundary in sections 25 and 24.—*E. W. Hubbell, D.L.S., 1898.*

